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## SAR TEST REPORT

**Applicant Name:**

**SAMSUNG Electronics Co., Ltd.**

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16677 Rep. of Korea

**Date of Issue:** Nov. 05, 2021

**Test Report No.:** HCT-SR-2110-FC012-R1

**Test Site:** HCT CO., LTD.

**FCC ID:**

**A3LSMN981B1**

**Equipment Type:**

**Mobile Phone**

**Application Type**

**Certification**

**FCC Rule Part(s):**

**CFR §2.1093**

**Model Name:**

**SM-N981B/DS**

**Additional Model Name:**

**SM-N981B**

**Date of Test:**

**Oct. 01, 2021 ~ Oct. 21, 2021**

This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in FCC KDB procedures and had been tested in accordance with the measurement procedures specified in FCC KDB procedures.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested By

Reviewed By

Yoon-Ho, Choi  
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**REVISION HISTORY**

The revision history for this test report is shown in table.

| Revision No. | Date of Issue | Description                                     |
|--------------|---------------|-------------------------------------------------|
| 0            | Oct. 29, 2021 | Initial Release                                 |
| 1            | Nov. 05, 2021 | Revised Sec.3, Sec.4. Sec.11, Sec.13 and Sec.14 |

This test results were applied only to the test methods required by the standard.

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

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## 1. Test Regulations

The tests documented in this report were performed in accordance with FCC CFR § 2.1093, IEEE 1528-2013, ANSI C63.26-2015 the following FCC Published RF exposure KDB procedures:

- FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
- FCC KDB Publication 941225 D06 Hot Spot SAR v02r01
- FCC KDB Publication 941225 D05 SAR for LTE Devices v02r05
- FCC KDB Publication 941225 D05A LTE Rel.10 KDB Inquiry sheet v01r02
- FCC KDB Publication 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB Publication 447498 D01 General SAR Guidance v06
- FCC KDB Publication 648474 D04 Handset SAR v01r03
- FCC KDB Publication 616217 D04 v01r02 (Proximity Sensor)
- FCC KDB Publication 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03
- FCC KDB Publication 971168 D01 Power Meas License Digital Systems v03r01

In Addition to the above, the following information was used.

- October 2013 TCB Workshop Notes (GPRS testing criteria)
- October 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- November 2017 TCBC Workshop Notes (LTE Carrier Aggregation)
- May 2017 TCBC Workshop Notes (LTE Band 41 Power Class 2)
- April 2018 TCBC Workshop Notes (LTE DL CA SAR Test Exclusion)
- April 2019 TCBC Workshop Notes (802.11ax SAR Testing)

## 2. Test Location

### 2.1 Test Laboratory

|              |                                                                                 |
|--------------|---------------------------------------------------------------------------------|
| Company Name | HCT Co., Ltd.                                                                   |
| Address      | 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA |
| Telephone    | 031-645-6300                                                                    |
| Fax.         | 031-645-6401                                                                    |

### 2.2 Test Facilities

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

|       |                                                         |
|-------|---------------------------------------------------------|
| Korea | National Radio Research Agency (Designation No. KR0032) |
|       | KOLAS (Testing No. KT197)                               |

## 3. Information of the EUT

### 3.1 General Information of the EUT

|                       |                               |
|-----------------------|-------------------------------|
| Model Name            | SM-N981B/DS                   |
| Additional Model Name | SM-N981B                      |
| Equipment Type        | Mobile Phone                  |
| FCC ID                | A3LSMN981B1                   |
| Application Type      | Certification                 |
| Applicant             | SAMSUNG Electronics Co., Ltd. |

### 3.2 Attestation of test result of device under test

| The Highest Reported SAR                  |                           |                               |                     |              |            |               |
|-------------------------------------------|---------------------------|-------------------------------|---------------------|--------------|------------|---------------|
| Band                                      | Tx. Frequency             | Equipment Class               | Reported SAR (W/kg) |              |            |               |
|                                           |                           |                               | 1g Head             | 1g Body-Worn | 1g Hotspot | 10g Extremity |
| GSM/GPRS/EDGE 850                         | 824.2 MHz ~ 848.8 MHz     | PCE                           | 0.18                | 0.36         | 0.62       | N/A           |
| GSM/GPRS/EDGE 1900                        | 1 850.2 MHz ~ 1 909.8 MHz | PCE                           | < 0.1               | 0.53         | 1.10       | 1.33          |
| UMTS 850                                  | 826.4 MHz ~ 846.6 MHz     | PCE                           | 0.14                | 0.27         | 0.50       | N/A           |
| UMTS 1700                                 | 1 712.4 MHz ~ 1 752.6 MHz | PCE                           | 0.13                | 0.48         | 0.95       | 1.88          |
| UMTS 1900                                 | 1 852.4 MHz ~ 1 907.6 MHz | PCE                           | < 0.1               | 0.44         | 1.08       | 1.76          |
| LTE Band 2 (PCS)                          | 1 850.7 MHz ~ 1 909.3 MHz | PCE                           | < 0.1               | 0.70         | 1.01       | 2.05          |
| LTE Band 4 (AWS)                          | 1 710.7 MHz ~ 1 754.3 MHz | PCE                           | N/A                 | N/A          | N/A        | N/A           |
| LTE Band 5 (Cell)                         | 824.7 MHz ~ 848.3 MHz     | PCE                           | 0.15                | 0.39         | 0.65       | N/A           |
| LTE Band 12                               | 699.7 MHz ~ 715.3 MHz     | PCE                           | < 0.1               | < 0.1        | 0.22       | N/A           |
| LTE Band 13                               | 779.5 MHz ~ 784.5 MHz     | PCE                           | 0.11                | 0.23         | 0.31       | N/A           |
| LTE Band 17                               | 706.5 MHz ~ 713.5 MHz     | PCE                           | N/A                 | N/A          | N/A        | N/A           |
| LTE Band 25 (PCS)                         | 1 850.7 MHz ~ 1 914.3 MHz | PCE                           | 0.11                | 0.56         | 1.04       | 1.41          |
| LTE Band 26 (Cell)                        | 814.7 MHz ~ 848.3 MHz     | PCE                           | 0.12                | 0.29         | 0.46       | N/A           |
| LTE TDD Band 41                           | 2 498.5 MHz ~ 2 687.5 MHz | PCE                           | < 0.1               | 0.47         | 0.58       | N/A           |
| LTE Band 66 (AWS)                         | 1 710.7 MHz ~ 1 779.3 MHz | PCE                           | 0.13                | 0.56         | 0.97       | 2.29          |
| 802.11b                                   | 2 412 MHz ~ 2 472 MHz     | DTS                           | 0.89                | 0.23         | 0.51       | N/A           |
| U-NII-1                                   | 5 180 MHz ~ 5 240 MHz     | NII                           | N/A                 | N/A          | N/A        | N/A           |
| U-NII-2A                                  | 5 260 MHz ~ 5 320 MHz     | NII                           | 0.39                | 0.66         | N/A        | 1.56          |
| U-NII-2C                                  | 5 500 MHz ~ 5 720 MHz     | NII                           | 0.37                | 0.47         | N/A        | 1.38          |
| U-NII-3                                   | 5 745 MHz ~ 5 825 MHz     | NII                           | 0.30                | 0.42         | 0.62       | N/A           |
| Bluetooth                                 | 2 402 MHz ~ 2 480 MHz     | DSS                           | 0.95                | 0.16         | 0.44       | N/A           |
| Simultaneous SAR per KDB 690783 D01v01r03 |                           |                               | 1.369               | 1.524        | 1.597      | 2.966         |
| Date(s) of Tests:                         |                           | Oct. 01. 2021 ~ Oct. 21. 2021 |                     |              |            |               |

## 4. Device Under Test Description

### 4.1 DUT specification

| Device Wireless specification overview |                                                                                                                                                                                        |                                |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Band & Mode                            | Operating Mode                                                                                                                                                                         | Tx Frequency                   |
| GSM850                                 | Voice / Data                                                                                                                                                                           | 824.2 MHz~ 848.8 MHz           |
| GSM1900                                | Voice / Data                                                                                                                                                                           | 1 850.2 MHz~ 1 909.8 MHz       |
| UMTS Band 5                            | Voice / Data                                                                                                                                                                           | 826.4 MHz~ 846.6 MHz           |
| UMTS Band 4                            | Voice / Data                                                                                                                                                                           | 1 712.4 MHz~ 1 752.6 MHz       |
| UMTS Band 2                            | Voice / Data                                                                                                                                                                           | 1 852.4 MHz~ 1 907.6 MHz       |
| LTE Band 2 (PCS)                       | Voice / Data                                                                                                                                                                           | 1 850.7 MHz~ 1 909.3 MHz       |
| LTE Band 4 (AWS)                       | Voice / Data                                                                                                                                                                           | 1 710.7 MHz~ 1 754.3 MHz       |
| LTE Band 5 (Cell)                      | Voice / Data                                                                                                                                                                           | 824.7 MHz~ 848.3 MHz           |
| LTE Band 12                            | Voice / Data                                                                                                                                                                           | 699.7 MHz~ 715.3 MHz           |
| LTE Band 13                            | Voice / Data                                                                                                                                                                           | 779.5 MHz~ 784.5 MHz           |
| LTE Band 17                            | Voice / Data                                                                                                                                                                           | 706.5 MHz ~ 713.5 MHz          |
| LTE Band 25                            | Voice / Data                                                                                                                                                                           | 1 850.7 MHz~ 1 914.3 MHz       |
| LTE Band 26                            | Voice / Data                                                                                                                                                                           | 814.7 MHz~ 848.3 MHz           |
| LTE TDD Band 41                        | Voice / Data                                                                                                                                                                           | 2 498.5 MHz~ 2 687.5 MHz       |
| LTE Band 66 (AWS)                      | Voice / Data                                                                                                                                                                           | 1 710.7 MHz ~ 1 779.3 MHz      |
| U-NII-1                                | Voice / Data                                                                                                                                                                           | 5 180 MHz ~ 5 240 MHz          |
| U-NII-2A                               | Voice / Data                                                                                                                                                                           | 5 260 MHz ~ 5 320 MHz          |
| U-NII-2C                               | Voice / Data                                                                                                                                                                           | 5 500 MHz ~ 5 720 MHz          |
| U-NII-3                                | Voice / Data                                                                                                                                                                           | 5 745 MHz ~ 5 825 MHz          |
| 2.4 GHz WLAN                           | Voice / Data                                                                                                                                                                           | 2 412 MHz ~ 2 462 MHz          |
| Bluetooth / LE 5.0                     | Data                                                                                                                                                                                   | 2 402 MHz ~ 2 480 MHz          |
| NFC                                    | Data                                                                                                                                                                                   | 13.56 MHz                      |
| MST                                    | Data                                                                                                                                                                                   | 555Hz~8.33kHz                  |
| WPC                                    | Data                                                                                                                                                                                   | 110kHz ~ 148kHz                |
| S-Pen WPC                              | Data                                                                                                                                                                                   | 590kHz ~ 625kHz                |
| Device Description                     |                                                                                                                                                                                        |                                |
| HW version                             | REV0.1                                                                                                                                                                                 |                                |
| SW version                             | N981B.001                                                                                                                                                                              |                                |
| Device Serial Numbers                  | Mode                                                                                                                                                                                   | Serial Number                  |
|                                        | Main                                                                                                                                                                                   | UIR1410M / UIR1408M / UIR1726M |
|                                        | WLAN                                                                                                                                                                                   | UIR1409M                       |
|                                        | The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units. |                                |

## 4.2 Power Reduction for SAR

This device utilizes power reduction mechanisms for some wireless modes and bands for SAR compliance under hotspot conditions and under some conditions when the device is being used in close proximity to the user's hand. All hotspot SAR evaluations for this device were performed at the maximum allowed output power when Hotspot is enabled. FCC KDB Publication 616217 D04v01r02 Sec.6 was used as a guideline for selection SAR test distances for device when being used in phablet use conditions.

This device uses an independent fixed level power reduction mechanism for WLAN modes during held-to-ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR Positions described in IEEE1528-2013. Detailed descriptions of the power reduction mechanism are included in the operational description.

The reduced powers for the power reduction mechanisms were conformed via conducted power measurements at the RF Port .

### 4.3 Nominal and Maximum Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

#### 4.3.1 Maximum PCE Output Power

| Mode / Band       |         | Voice     | Burst Average GMSK (dBm) |           |           |           | Burst Average 8-PSK (dBm) |           |           |           |
|-------------------|---------|-----------|--------------------------|-----------|-----------|-----------|---------------------------|-----------|-----------|-----------|
|                   |         | 1 Tx Slot | 1 Tx Slot                | 2 Tx Slot | 3 Tx Slot | 4 Tx Slot | 1 Tx Slot                 | 2 Tx Slot | 3 Tx Slot | 4 Tx Slot |
| GSM/GPRS/EDGE 850 | Maximum | 34.0      | 34.0                     | 32.0      | 30.5      | 29.0      | 27.0                      | 25.0      | 23.5      | 22.0      |
|                   | Nominal | 33.0      | 33.0                     | 31.0      | 29.5      | 28.0      | 26.0                      | 24.0      | 22.5      | 21.0      |
| GSM/GPRS/EDGE1900 | Maximum | 31.0      | 31.0                     | 28.5      | 26.5      | 25.0      | 26.0                      | 24.0      | 22.5      | 21.0      |
|                   | Nominal | 30.0      | 30.0                     | 27.5      | 25.5      | 24.0      | 25.0                      | 23.0      | 21.5      | 20.0      |

| Mode / Band            |         | Modulated Average (dBm) |            |            |          |
|------------------------|---------|-------------------------|------------|------------|----------|
|                        |         | 3GPP WCDMA              | 3GPP HSDPA | 3GPP HSUPA | DC-HSDPA |
| UMTS Band 5 (850 MHz)  | Maximum | 25.0                    | 23.5       | 23.0       | 24.3     |
|                        | Nominal | 24.0                    | 22.5       | 22.0       | 23.3     |
| UMTS Band 4 (1700 MHz) | Maximum | 23.5                    | 23.5       | 22.0       | 23.5     |
|                        | Nominal | 22.5                    | 22.5       | 21.0       | 22.5     |
| UMTS Band 2 (1900 MHz) | Maximum | 23.5                    | 23.5       | 22.0       | 23.5     |
|                        | Nominal | 22.5                    | 22.5       | 21.0       | 22.5     |

| Mode / Band            |         | Modulated Average (dBm) |
|------------------------|---------|-------------------------|
| LTE Band 2 (PCS)       | Maximum | 23.0                    |
|                        | Nominal | 22.0                    |
| LTE Band 4 (AWS)       | Maximum | 23.7                    |
|                        | Nominal | 22.7                    |
| LTE Band 5 (Cell)      | Maximum | 25.0                    |
|                        | Nominal | 24.0                    |
| LTE Band 12            | Maximum | 24.5                    |
|                        | Nominal | 23.5                    |
| LTE Band 13            | Maximum | 25.0                    |
|                        | Nominal | 24.0                    |
| LTE Band 17            | Maximum | 24.5                    |
|                        | Nominal | 23.5                    |
| LTE Band 25 (PCS)      | Maximum | 23.0                    |
|                        | Nominal | 22.0                    |
| LTE Band 26 (Cell)     | Maximum | 25.0                    |
|                        | Nominal | 24.0                    |
| LTE TDD Band 41        | Maximum | 24.4                    |
|                        | Nominal | 23.4                    |
| LTE TDD Band 41 (HPUE) | Maximum | 25.7                    |
|                        | Nominal | 24.7                    |
| LTE Band 66 (AWS)      | Maximum | 23.7                    |
|                        | Nominal | 22.7                    |

### 4.3.2 Reduced PCE Power (Hotspot Mode / Grip Sensor on / Ear jack)

| Mode / Band                                              |         | Voice     | Burst Average GMSK (dBm) |           |           |           | Burst Average 8-PSK (dBm) |           |           |           |
|----------------------------------------------------------|---------|-----------|--------------------------|-----------|-----------|-----------|---------------------------|-----------|-----------|-----------|
|                                                          |         | 1 Tx Slot | 1 Tx Slot                | 2 Tx Slot | 3 Tx Slot | 4 Tx Slot | 1 Tx Slot                 | 2 Tx Slot | 3 Tx Slot | 4 Tx Slot |
| GSM/GPRS/EDGE1900<br>(Ear jack, Grip Sensor on, Hotspot) | Maximum | 28.0      | 28.0                     | 25.5      | 23.5      | 22.5      | 26.0                      | 23.5      | 22.0      | 20.5      |
|                                                          | Nominal | 27.0      | 27.0                     | 24.5      | 22.5      | 21.5      | 25.0                      | 22.5      | 21.0      | 19.5      |

| Mode / Band                                                   |         | Modulated Average (dBm) |            |            |          |
|---------------------------------------------------------------|---------|-------------------------|------------|------------|----------|
|                                                               |         | 3GPP WCDMA              | 3GPP HSDPA | 3GPP HSUPA | DC-HSDPA |
| UMTS Band 4 (1700 MHz)<br>(Ear jack, Grip Sensor on, Hotspot) | Maximum | 20.0                    | 20.0       | 19.0       | 20.0     |
|                                                               | Nominal | 19.0                    | 19.0       | 18.0       | 19.0     |
| UMTS Band 2 (1900 MHz)<br>(Ear jack, Grip Sensor on, Hotspot) | Maximum | 20.0                    | 19.0       | 19.0       | 19.0     |
|                                                               | Nominal | 19.0                    | 18.0       | 18.0       | 18.0     |

| Mode / Band            |         | Modulated Average (dBm) |              |          |
|------------------------|---------|-------------------------|--------------|----------|
|                        |         | Grip Sensor on          | Hotspot Mode | Ear jack |
| LTE Band 2 (PCS)       | Maximum | 19.5                    | 19.5         | 19.5     |
|                        | Nominal | 18.5                    | 18.5         | 18.5     |
| LTE Band 4 (AWS)       | Maximum | 20.5                    | 20.5         | 20.5     |
|                        | Nominal | 19.5                    | 19.5         | 19.5     |
| LTE Band 25 (PCS)      | Maximum | 19.5                    | 19.5         | 19.5     |
|                        | Nominal | 18.5                    | 18.5         | 18.5     |
| LTE TDD Band 41        | Maximum | 23.4                    | 23.4         | 23.4     |
|                        | Nominal | 22.4                    | 22.4         | 22.4     |
| LTE TDD Band 41 (HUPE) | Maximum | 23.4                    | 23.4         | 23.4     |
|                        | Nominal | 22.4                    | 22.4         | 22.4     |
| LTE Band 66 (AWS)      | Maximum | 20.5                    | 20.5         | 20.5     |
|                        | Nominal | 19.5                    | 19.5         | 19.5     |

### 4.3.3 Maximum 2.4 GHz, 5 GHz WIFI output power

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

| Mode            | Band    | SISO              |    |    |                   |                   |                  | MIMO              |                 |                         |                          |                              |
|-----------------|---------|-------------------|----|----|-------------------|-------------------|------------------|-------------------|-----------------|-------------------------|--------------------------|------------------------------|
|                 |         | a                 | b  | g  | n                 | ac                | ax(SU)           | a<br>(CDD+STBC)   | g<br>(CDD+STBC) | n<br>(CDD+STBC,<br>SDM) | ac<br>(CDD+STBC,<br>SDM) | ax(SU)<br>(CDD+STBC,<br>SDM) |
| 2.4GHz          | 1 CH    |                   | 19 | 15 | 14                |                   | 14               |                   | 18              | 17                      |                          | 17                           |
|                 | 2~10 CH |                   | 19 | 16 | 16                |                   | 16<br>(10ch: 15) |                   | 19              | 19                      |                          | 19<br>(10ch: 18)             |
|                 | 11 CH   |                   | 19 | 15 | 14                |                   | 14               |                   | 18              | 17                      |                          | 17                           |
| 5GHz<br>(20MHz) | 5200MHz | 17                |    |    | 17                | 17                |                  | 20                |                 | 20                      | 20                       | 20<br>(36ch: 19)             |
|                 | 5300MHz | 17<br>(64ch: 16)  |    |    | 17<br>(64ch: 16)  | 17<br>(64ch: 16)  |                  | 20<br>(64ch: 19)  |                 | 20<br>(64ch: 19)        | 20<br>(64ch: 19)         | 20<br>(64ch: 19)             |
|                 | 5500MHz | 17<br>(100ch: 16) |    |    | 17<br>(100ch: 16) | 17<br>(100ch: 16) |                  | 20<br>(100ch: 19) |                 | 20<br>(100ch: 19)       | 20<br>(100ch: 19)        | 20<br>(100ch: 19)            |
|                 | 5800MHz | 17                |    |    | 17                | 17                |                  | 20                |                 | 20                      | 20                       | 20                           |
| 5GHz<br>(40MHz) | 5200MHz |                   |    |    | 16<br>(38ch: 12)  | 16<br>(38ch: 12)  |                  |                   |                 | 19<br>(38ch: 15)        | 19<br>(38ch: 15)         | 19<br>(38ch: 15)             |
|                 | 5300MHz |                   |    |    | 16<br>(62ch: 12)  | 16<br>(62ch: 12)  |                  |                   |                 | 19<br>(62ch: 15)        | 19<br>(62ch: 15)         | 19<br>(62ch: 15)             |
|                 | 5500MHz |                   |    |    | 16<br>(102ch: 12) | 16<br>(102ch: 12) |                  |                   |                 | 19<br>(102ch: 15)       | 19<br>(102ch: 15)        | 19<br>(102ch: 15)            |
|                 | 5800MHz |                   |    |    | 16                | 16                |                  |                   |                 | 19                      | 19                       | 19                           |
| 5GHz<br>(80MHz) | 5200MHz |                   |    |    |                   | 12                |                  |                   |                 |                         | 15                       | 14                           |
|                 | 5300MHz |                   |    |    |                   | 12                |                  |                   |                 |                         | 15                       | 14                           |
|                 | 5500MHz |                   |    |    |                   | 15<br>(106ch: 12) |                  |                   |                 |                         | 18<br>(106ch: 15)        | 18<br>(106ch: 15)            |
|                 | 5800MHz |                   |    |    |                   | 15                |                  |                   |                 |                         | 18                       | 18                           |

(Tolerance: target -1.5dB ~ +1.0 dB)

#### 4.3.4 Reduced 2.4 GHz, 5 GHz WIFI output power (RCV on)

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

| Mode            | Band    | SISO |    |    |                   |                   |                  | MIMO            |                 |                         |                          |                              |
|-----------------|---------|------|----|----|-------------------|-------------------|------------------|-----------------|-----------------|-------------------------|--------------------------|------------------------------|
|                 |         | a    | b  | g  | n                 | ac                | ax(SU)           | a<br>(CDD+STBC) | g<br>(CDD+STBC) | n<br>(CDD+STBC,<br>SDM) | ac<br>(CDD+STBC,<br>SDM) | ax(SU)<br>(CDD+STBC,<br>SDM) |
| 2.4GHz          | 1 CH    |      | 16 | 15 | 14                |                   | 14               |                 | 18              | 17                      |                          | 17                           |
|                 | 2~10 CH |      | 16 | 16 | 16                |                   | 16<br>(10ch: 15) |                 | 19              | 19                      |                          | 19<br>(10ch: 18)             |
|                 | 11 CH   |      | 16 | 15 | 14                |                   | 14               |                 | 18              | 17                      |                          | 17                           |
| 5GHz<br>(20MHz) | 5200MHz | 14   |    |    | 14                | 14                |                  | 17              |                 | 17                      | 17                       | 17                           |
|                 | 5300MHz | 14   |    |    | 14                | 14                |                  | 17              |                 | 17                      | 17                       | 17                           |
|                 | 5500MHz | 14   |    |    | 14                | 14                |                  | 17              |                 | 17                      | 17                       | 17                           |
|                 | 5800MHz | 14   |    |    | 14                | 14                |                  | 17              |                 | 17                      | 17                       | 17                           |
| 5GHz<br>(40MHz) | 5200MHz |      |    |    | 14<br>(38ch: 12)  | 14<br>(38ch: 12)  |                  |                 |                 | 17<br>(38ch: 15)        | 17<br>(38ch: 15)         | 17<br>(38ch: 15)             |
|                 | 5300MHz |      |    |    | 14<br>(62ch: 12)  | 14<br>(62ch: 12)  |                  |                 |                 | 17<br>(62ch: 15)        | 17<br>(62ch: 15)         | 17<br>(62ch: 15)             |
|                 | 5500MHz |      |    |    | 14<br>(102ch: 12) | 14<br>(102ch: 12) |                  |                 |                 | 17<br>(102ch: 15)       | 17<br>(102ch: 15)        | 17<br>(102ch: 15)            |
|                 | 5800MHz |      |    |    | 14                | 14                |                  |                 |                 | 17                      | 17                       | 17                           |
| 5GHz<br>(80MHz) | 5200MHz |      |    |    |                   | 12                |                  |                 |                 |                         | 15                       | 14                           |
|                 | 5300MHz |      |    |    |                   | 12                |                  |                 |                 |                         | 15                       | 14                           |
|                 | 5500MHz |      |    |    |                   | 14<br>(106ch: 12) |                  |                 |                 |                         | 17<br>(106ch: 15)        | 17<br>(106ch: 15)            |
|                 | 5800MHz |      |    |    |                   | 14                |                  |                 |                 |                         | 17                       | 17                           |

(Tolerance: target -1.5dB ~ +1.0 dB)

#### 4.3.5 2.4 GHz, 5 GHz WIFI output power – RSDB

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

| Mode            | Band    | SISO |    |    |                   |                   |                  | MIMO            |                 |                         |                          |                              |
|-----------------|---------|------|----|----|-------------------|-------------------|------------------|-----------------|-----------------|-------------------------|--------------------------|------------------------------|
|                 |         | a    | b  | g  | n                 | ac                | ax(SU)           | a<br>(CDD+STBC) | g<br>(CDD+STBC) | n<br>(CDD+STBC,<br>SDM) | ac<br>(CDD+STBC,<br>SDM) | ax(SU)<br>(CDD+STBC,<br>SDM) |
| 2.4GHz          | 1 CH    |      | 16 | 15 | 14                |                   | 14               |                 | 18              | 17                      |                          | 17                           |
|                 | 2~10 CH |      | 16 | 16 | 16                |                   | 16<br>(10ch: 15) |                 | 19              | 19                      |                          | 19<br>(10ch: 18)             |
|                 | 11 CH   |      | 16 | 15 | 14                |                   | 14               |                 | 18              | 17                      |                          | 17                           |
| 5GHz<br>(20MHz) | 5200MHz | 13   |    |    | 13                | 13                |                  | 16              |                 | 16                      | 16                       | 16                           |
|                 | 5300MHz | 13   |    |    | 13                | 13                |                  | 16              |                 | 16                      | 16                       | 16                           |
|                 | 5500MHz | 13   |    |    | 13                | 13                |                  | 16              |                 | 16                      | 16                       | 16                           |
|                 | 5800MHz | 13   |    |    | 13                | 13                |                  | 16              |                 | 16                      | 16                       | 16                           |
| 5GHz<br>(40MHz) | 5200MHz |      |    |    | 13<br>(38ch: 12)  | 13<br>(38ch: 12)  |                  |                 |                 | 16<br>(38ch: 15)        | 16<br>(38ch: 15)         | 16<br>(38ch: 15)             |
|                 | 5300MHz |      |    |    | 13<br>(62ch: 12)  | 13<br>(62ch: 12)  |                  |                 |                 | 16<br>(62ch: 15)        | 16<br>(62ch: 15)         | 16<br>(62ch: 15)             |
|                 | 5500MHz |      |    |    | 13<br>(102ch: 12) | 13<br>(102ch: 12) |                  |                 |                 | 16<br>(102ch: 15)       | 16<br>(102ch: 15)        | 16<br>(102ch: 15)            |
|                 | 5800MHz |      |    |    | 13                | 13                |                  |                 |                 | 16                      | 16                       | 16                           |
| 5GHz<br>(80MHz) | 5200MHz |      |    |    |                   | 12                |                  |                 |                 |                         | 15                       | 14                           |
|                 | 5300MHz |      |    |    |                   | 12                |                  |                 |                 |                         | 15                       | 14                           |
|                 | 5500MHz |      |    |    |                   | 13<br>(106ch: 12) |                  |                 |                 |                         | 16<br>(106ch: 15)        | 16<br>(106ch: 15)            |
|                 | 5800MHz |      |    |    |                   | 13                |                  |                 |                 |                         | 16                       | 16                           |

(Tolerance: target -1.5dB ~ +1.0 dB)

#### 4.3.6 2.4 GHz, 5 GHz WIFI output power – RSDB with RCV on (Reduced Power)

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

| Mode            | Band    | SISO |    |    |                   |                   |        | MIMO            |                 |                         |                          |                              |
|-----------------|---------|------|----|----|-------------------|-------------------|--------|-----------------|-----------------|-------------------------|--------------------------|------------------------------|
|                 |         | a    | b  | g  | n                 | ac                | ax(SU) | a<br>(CDD+STBC) | g<br>(CDD+STBC) | n<br>(CDD+STBC,<br>SDM) | ac<br>(CDD+STBC,<br>SDM) | ax(SU)<br>(CDD+STBC,<br>SDM) |
| 2.4GHz          | 2.45GHz |      | 13 | 13 | 13                |                   | 13     |                 | 16              | 16                      |                          | 16                           |
| 5GHz<br>(20MHz) | 5200MHz | 13   |    |    | 13                | 13                |        | 16              |                 | 16                      | 16                       | 16                           |
|                 | 5300MHz | 13   |    |    | 13                | 13                |        | 16              |                 | 16                      | 16                       | 16                           |
|                 | 5500MHz | 13   |    |    | 13                | 13                |        | 16              |                 | 16                      | 16                       | 16                           |
|                 | 5800MHz | 13   |    |    | 13                | 13                |        | 16              |                 | 16                      | 16                       | 16                           |
| 5GHz<br>(40MHz) | 5200MHz |      |    |    | 13<br>(38ch: 12)  | 13<br>(38ch: 12)  |        |                 |                 | 16<br>(38ch: 15)        | 16<br>(38ch: 15)         | 16<br>(38ch: 15)             |
|                 | 5300MHz |      |    |    | 13<br>(62ch: 12)  | 13<br>(62ch: 12)  |        |                 |                 | 16<br>(62ch: 15)        | 16<br>(62ch: 15)         | 16<br>(62ch: 15)             |
|                 | 5500MHz |      |    |    | 13<br>(102ch: 12) | 13<br>(102ch: 12) |        |                 |                 | 16<br>(102ch: 15)       | 16<br>(102ch: 15)        | 16<br>(102ch: 15)            |
|                 | 5800MHz |      |    |    | 13                | 13                |        |                 |                 | 16                      | 16                       | 16                           |
| 5GHz<br>(80MHz) | 5200MHz |      |    |    |                   | 12                |        |                 |                 |                         | 15                       | 14                           |
|                 | 5300MHz |      |    |    |                   | 12                |        |                 |                 |                         | 15                       | 14                           |
|                 | 5500MHz |      |    |    |                   | 13<br>(106ch: 12) |        |                 |                 |                         | 16<br>(106ch: 15)        | 16<br>(106ch: 15)            |
|                 | 5800MHz |      |    |    |                   | 13                |        |                 |                 |                         | 16                       | 16                           |

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.7 802.11ax RU Tx Power

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

| Mode            | Band    | SISO |     |      |                  |      |      | MIMO                                            |                   |                   |                   |                      |                      |
|-----------------|---------|------|-----|------|------------------|------|------|-------------------------------------------------|-------------------|-------------------|-------------------|----------------------|----------------------|
|                 |         | 26T  | 52T | 106T | 242T             | 484T | 996T | 26T                                             | 52T               | 106T              | 242T              | 484T                 | 996T                 |
| 2.4GHz          | 1 CH    | 16   | 16  | 15   | 14               |      |      | 19                                              | 19                | 18                | 17                |                      |                      |
|                 | 2~10 CH | 16   | 16  | 16   | 16<br>(10ch: 15) |      |      | 19                                              | 19                | 19                | 19<br>(10ch: 18)  |                      |                      |
|                 | 11 CH   | 14   | 16  | 16   | 14               |      |      | 17                                              | 19                | 19                | 17                |                      |                      |
| 5GHz<br>(20MHz) | 5200MHz |      |     |      |                  |      |      | 13                                              | 16                | 19                | 20<br>(36ch: 19)  |                      |                      |
|                 | 5300MHz |      |     |      |                  |      |      | 13                                              | 16                | 19                | 20<br>(64ch: 19)  |                      |                      |
|                 | 5500MHz |      |     |      |                  |      |      | 12.5                                            | 16                | 19                | 20<br>(100ch: 19) |                      |                      |
|                 | 5800MHz |      |     |      |                  |      |      | 17<br>(153,157ch:<br>16)<br>(161, 165ch:<br>15) | 18                | 19<br>(149ch: 20) | 20                |                      |                      |
| 5GHz<br>(40MHz) | 5200MHz |      |     |      |                  |      |      | 13<br>(ch46: 11)                                | 16                | 19                | 19                | 19<br>(38ch:<br>15)  |                      |
|                 | 5300MHz |      |     |      |                  |      |      | 13<br>(54ch: 11)                                | 16                | 19                | 19                | 19<br>(62ch:<br>15)  |                      |
|                 | 5500MHz |      |     |      |                  |      |      | 12.5                                            | 16                | 19<br>(102ch: 17) | 19<br>(102ch: 17) | 19<br>(102ch:<br>15) |                      |
|                 | 5800MHz |      |     |      |                  |      |      | 16<br>(159ch: 15)                               | 18<br>(159ch: 17) | 19                | 19                | 19                   |                      |
| 5GHz<br>(80MHz) | 5200MHz |      |     |      |                  |      |      | 13                                              | 15                | 15                | 15                | 15                   | 14                   |
|                 | 5300MHz |      |     |      |                  |      |      | 13                                              | 15                | 15                | 15                | 15                   | 14                   |
|                 | 5500MHz |      |     |      |                  |      |      | 13                                              | 16<br>(106ch: 15) | 18<br>(106ch: 15) | 18<br>(106ch: 17) | 18<br>(106ch:<br>15) | 18<br>(106ch:<br>15) |
|                 | 5800MHz |      |     |      |                  |      |      | 16                                              | 18                | 18                | 18                | 18                   | 18                   |

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.8 Reduced Power 11ax RU Tx power Tables – RCV on

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

| Mode            | Band    | SISO |     |      |                  |      |      | MIMO                   |                   |                   |                  |                   |                   |
|-----------------|---------|------|-----|------|------------------|------|------|------------------------|-------------------|-------------------|------------------|-------------------|-------------------|
|                 |         | 26T  | 52T | 106T | 242T             | 484T | 996T | 26T                    | 52T               | 106T              | 242T             | 484T              | 996T              |
| 2.4GHz          | 1 CH    | 16   | 16  | 15   | 14               |      |      | 19                     | 19                | 18                | 17               |                   |                   |
|                 | 2~10 CH | 16   | 16  | 16   | 16<br>(10ch: 15) |      |      | 19                     | 19                | 19                | 19<br>(10ch: 18) |                   |                   |
|                 | 11 CH   | 14   | 16  | 16   | 14               |      |      | 17                     | 19                | 19                | 17               |                   |                   |
| 5GHz<br>(20MHz) | 5200MHz |      |     |      |                  |      |      | 13                     | 16                | 16                | 16               |                   |                   |
|                 | 5300MHz |      |     |      |                  |      |      | 13                     | 16                | 16                | 16               |                   |                   |
|                 | 5500MHz |      |     |      |                  |      |      | 12.5                   | 16                | 16                | 16               |                   |                   |
|                 | 5800MHz |      |     |      |                  |      |      | 16<br>(161, 165ch: 15) | 16                | 16                | 16               |                   |                   |
| 5GHz<br>(40MHz) | 5200MHz |      |     |      |                  |      |      | 13<br>(ch46: 11)       | 16                | 16                | 16               | 16<br>(38ch: 15)  |                   |
|                 | 5300MHz |      |     |      |                  |      |      | 13<br>(54ch: 11)       | 16                | 16                | 16               | 16<br>(62ch: 15)  |                   |
|                 | 5500MHz |      |     |      |                  |      |      | 12.5                   | 16                | 16                | 16               | 16<br>(102ch: 15) |                   |
|                 | 5800MHz |      |     |      |                  |      |      | 16<br>(159ch: 15)      | 16                | 16                | 16               | 16                |                   |
| 5GHz<br>(80MHz) | 5200MHz |      |     |      |                  |      |      | 13                     | 15                | 15                | 15               | 15                | 14                |
|                 | 5300MHz |      |     |      |                  |      |      | 13                     | 15                | 15                | 15               | 15                | 14                |
|                 | 5500MHz |      |     |      |                  |      |      | 13                     | 16<br>(106ch: 15) | 16<br>(106ch: 15) | 16               | 16<br>(106ch: 15) | 16<br>(106ch: 15) |
|                 | 5800MHz |      |     |      |                  |      |      | 16                     | 16                | 16                | 16               | 16                | 16                |

(Tolerance: target -1.5dB ~ +1.0 dB)

### 4.3.9 Power 11ax RU Tx power Tables in RSDB mode

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

| Mode            | Band    | SISO |     |      |                  |      |      | MIMO                   |                   |                   |                  |                   |                   |
|-----------------|---------|------|-----|------|------------------|------|------|------------------------|-------------------|-------------------|------------------|-------------------|-------------------|
|                 |         | 26T  | 52T | 106T | 242T             | 484T | 996T | 26T                    | 52T               | 106T              | 242T             | 484T              | 996T              |
| 2.4GHz          | 1 CH    | 16   | 16  | 15   | 14               |      |      | 19                     | 19                | 18                | 17               |                   |                   |
|                 | 2~10 CH | 16   | 16  | 16   | 16<br>(10ch: 15) |      |      | 19                     | 19                | 19                | 19<br>(10ch: 18) |                   |                   |
|                 | 11 CH   | 14   | 16  | 16   | 14               |      |      | 17                     | 19                | 19                | 17               |                   |                   |
| 5GHz<br>(20MHz) | 5200MHz |      |     |      |                  |      |      | 13                     | 16                | 16                | 16               |                   |                   |
|                 | 5300MHz |      |     |      |                  |      |      | 13                     | 16                | 16                | 16               |                   |                   |
|                 | 5500MHz |      |     |      |                  |      |      | 12.5                   | 16                | 16                | 16               |                   |                   |
|                 | 5800MHz |      |     |      |                  |      |      | 16<br>(161, 165ch: 15) | 16                | 16                | 16               |                   |                   |
| 5GHz<br>(40MHz) | 5200MHz |      |     |      |                  |      |      | 13<br>(ch46: 11)       | 16                | 16                | 16               | 16<br>(38ch: 15)  |                   |
|                 | 5300MHz |      |     |      |                  |      |      | 13<br>(54ch: 11)       | 16                | 16                | 16               | 16<br>(62ch: 15)  |                   |
|                 | 5500MHz |      |     |      |                  |      |      | 12.5                   | 16                | 16                | 16               | 16<br>(102ch: 15) |                   |
|                 | 5800MHz |      |     |      |                  |      |      | 16<br>(159ch: 15)      | 16                | 16                | 16               | 16                |                   |
| 5GHz<br>(80MHz) | 5200MHz |      |     |      |                  |      |      | 13                     | 15                | 15                | 15               | 15                | 14                |
|                 | 5300MHz |      |     |      |                  |      |      | 13                     | 15                | 15                | 15               | 15                | 14                |
|                 | 5500MHz |      |     |      |                  |      |      | 13                     | 16<br>(106ch: 15) | 16<br>(106ch: 15) | 16               | 16<br>(106ch: 15) | 16<br>(106ch: 15) |
|                 | 5800MHz |      |     |      |                  |      |      | 16                     | 16                | 16                | 16               | 16                | 16                |

(Tolerance: target -1.5dB ~ +1.0 dB)

#### 4.3.10 Power 11ax RU Tx power Tables in RSDB with RCV on (Reduced Power)

(Airplane mode: SISO: ch12: 10dB, ch13: 6.5dB / MIMO: ch12:13dB, ch13: 9.5dB)

| Mode            | Band    | SISO |     |      |      |      |      | MIMO                         |                   |                   |      |                   |                   |
|-----------------|---------|------|-----|------|------|------|------|------------------------------|-------------------|-------------------|------|-------------------|-------------------|
|                 |         | 26T  | 52T | 106T | 242T | 484T | 996T | 26T                          | 52T               | 106T              | 242T | 484T              | 996T              |
| 2.4GHz          | 2.45GHz | 13   | 13  | 13   | 13   |      |      | 16                           | 16                | 16                | 16   |                   |                   |
| 5GHz<br>(20MHz) | 5200MHz |      |     |      |      |      |      | 13                           | 16                | 16                | 16   |                   |                   |
|                 | 5300MHz |      |     |      |      |      |      | 13                           | 16                | 16                | 16   |                   |                   |
|                 | 5500MHz |      |     |      |      |      |      | 12.5                         | 16                | 16                | 16   |                   |                   |
|                 | 5800MHz |      |     |      |      |      |      | 16<br>(161,<br>165ch:<br>15) | 16                | 16                | 16   |                   |                   |
| 5GHz<br>(40MHz) | 5200MHz |      |     |      |      |      |      | 13<br>(ch46:<br>11)          | 16                | 16                | 16   | 16<br>(38ch: 15)  |                   |
|                 | 5300MHz |      |     |      |      |      |      | 13<br>(54ch:<br>11)          | 16                | 16                | 16   | 16<br>(62ch: 15)  |                   |
|                 | 5500MHz |      |     |      |      |      |      | 12.5                         | 16                | 16                | 16   | 16<br>(102ch: 15) |                   |
|                 | 5800MHz |      |     |      |      |      |      | 16<br>(159ch:<br>15)         | 16                | 16                | 16   | 16                |                   |
| 5GHz<br>(80MHz) | 5200MHz |      |     |      |      |      |      | 13                           | 15                | 15                | 15   | 15                | 14                |
|                 | 5300MHz |      |     |      |      |      |      | 13                           | 15                | 15                | 15   | 15                | 14                |
|                 | 5500MHz |      |     |      |      |      |      | 13                           | 16<br>(106ch: 15) | 16<br>(106ch: 15) | 16   | 16<br>(106ch: 15) | 16<br>(106ch: 15) |
|                 | 5800MHz |      |     |      |      |      |      | 16                           | 16                | 16                | 16   | 16                | 16                |

(Tolerance: target -1.5dB ~ +1.0 dB)

#### 4.3.11. Legacy(11b/g/n/a/ac) Real Simultaneous Dual Band (RSDB) Power

|                                | #<br>TX | 5 GHz WIFI[dBm] |        | 2.4 GHz WIFI[dBm] |        | 802.11 Modes                                                                 |
|--------------------------------|---------|-----------------|--------|-------------------|--------|------------------------------------------------------------------------------|
|                                |         | Ant1            | Ant2   | Ant1              | Ant2   |                                                                              |
| 2.4 GHz + 5 GHz<br>RSDB Only   | 2       | 13 dBm          | -      | -                 | 16 dBm | 2.4 GHz: b, g, n, ax<br>5 GHz: a, n, ac                                      |
|                                | 2       | -               | 13 dBm | 16 dBm            | -      |                                                                              |
|                                | 2       | 13 dBm          | -      | 16 dBm            | -      |                                                                              |
|                                | 2       | -               | 13 dBm | -                 | 16 dBm |                                                                              |
| 2.4 GHz + 5 GHz<br>RSDB & MIMO | 3       | 13 dBm          | 13 dBm | 16 dBm            | -      | 2.4 GHz: b, g, n,ax<br>5 GHz: a, n, ac,ax (CDD+STBC<br>Only)                 |
|                                | 3       | 13 dBm          | 13 dBm | -                 | 16 dBm |                                                                              |
|                                | 3       | 13 dBm          | -      | 16 dBm            | 16 dBm | 2.4 GHz: g, n, ax(CDD+STBC<br>Only),<br>5 GHz: a, n, ac                      |
|                                | 3       | -               | 13 dBm | 16 dBm            | 16 dBm |                                                                              |
| 2.4 GHz + 5 GHz<br>RSDB MIMO   | 4       | 13 dBm          | 13 dBm | 16 dBm            | 16 dBm | 2.4 GHz: g, n,ax<br>(CDD+STBC Only)<br>5 GHz: a, n, ac,ax (CDD+STBC<br>Only) |

(Tolerance: target -1.5dB ~ +1.0 dB)

#### 4.3.12. Legacy(11b/g/n/a/ac) Real Simultaneous Dual Band (RSDB) Power with RCV On

|                                | #TX | 5 GHz WIFI[dBm] |        | 2.4 GHz WIFI[dBm] |        | 802.11 Modes                                                                 |
|--------------------------------|-----|-----------------|--------|-------------------|--------|------------------------------------------------------------------------------|
|                                |     | Ant1            | Ant2   | Ant1              | Ant2   |                                                                              |
| 2.4 GHz + 5 GHz<br>RSDB Only   | 2   | 13 dBm          | -      | -                 | 13 dBm | 2.4 GHz: b, g, n, ax<br>5 GHz: a, n, ac                                      |
|                                | 2   | -               | 13 dBm | 13 dBm            | -      |                                                                              |
|                                | 2   | 13 dBm          | -      | 13 dBm            | -      |                                                                              |
|                                | 2   | -               | 13 dBm | -                 | 13 dBm |                                                                              |
| 2.4 GHz + 5 GHz<br>RSDB & MIMO | 3   | 13 dBm          | 13 dBm | 13 dBm            | -      | 2.4 GHz: b, g, n,ax<br>5 GHz: a, n, ac,ax (CDD+STBC<br>Only)                 |
|                                | 3   | 13 dBm          | 13 dBm | -                 | 13 dBm |                                                                              |
|                                | 3   | 13 dBm          | -      | 13 dBm            | 13 dBm | 2.4 GHz: g, n, ax(CDD+STBC<br>Only),<br>5 GHz: a, n, ac                      |
|                                | 3   | -               | 13 dBm | 13 dBm            | 13 dBm |                                                                              |
| 2.4 GHz + 5 GHz<br>RSDB MIMO   | 4   | 13 dBm          | 13 dBm | 13 dBm            | 13 dBm | 2.4 GHz: g, n,ax<br>(CDD+STBC Only)<br>5 GHz: a, n, ac,ax (CDD+STBC<br>Only) |

(Tolerance: target -1.5dB ~ +1.0 dB)

#### 4.3.13. Simultaneous TX condition Bluetooth with 5GHz WIFI (not RSDB)

|                                          | #TX | 5 GHz WIFI[dBm] |      | 2.4GHz BT |
|------------------------------------------|-----|-----------------|------|-----------|
|                                          |     | Ant1            | Ant2 | Ant1      |
| BT(2.4 GHz) +<br>5GHz WiFi<br>(Not RSDB) | 2   | o               | -    | o         |
|                                          | 2   |                 | o    | o         |
|                                          | 3   | o               | o    | o         |

#### 4.3.14 Maximum Bluetooth Power

| Mode / Band                        |         | Modulated Average (dBm) |
|------------------------------------|---------|-------------------------|
| Bluetooth (1 Mbps)                 | Maximum | 17.5                    |
|                                    | Nominal | 16.5                    |
| Bluetooth (EDR)                    | Maximum | 11.5                    |
|                                    | Nominal | 10.5                    |
| Bluetooth LE<br>(2 Mbps)           | Maximum | 9.0                     |
|                                    | Nominal | 8.0                     |
| Bluetooth LE<br>1Mbps, 125/500Kbps | Maximum | 8.0                     |
|                                    | Nominal | 7.0                     |

## 4.4 LTE Information

| Item.              | Description                                                     |
|--------------------|-----------------------------------------------------------------|
| Frequency Range    | LTE Band 2 (PCS) 1 850.7 MHz~ 1 909.3 MHz                       |
|                    | LTE Band 4 (AWS) 1 710.7 MHz~ 1 754.3 MHz                       |
|                    | LTE Band 5 (Cell) 824.7 MHz~ 848.3 MHz                          |
|                    | LTE Band 12 699.7 MHz ~ 715.3 MHz                               |
|                    | LTE Band 13 779.5 MHz ~ 784.5 MHz                               |
|                    | LTE Band 17 706.5 MHz ~ 713.5 MHz                               |
|                    | LTE Band 25 (PCS) 1 850.7 MHz ~ 1 914.3 MHz                     |
|                    | LTE Band 26 (Cell) 814.7 MHz ~ 848.3 MHz                        |
|                    | LTE TDD Band 41 2 498.5 MHz ~ 2 687.5 MHz                       |
|                    | LTE Band 66 (AWS) 1 710.7 MHz ~ 1 779.3 MHz                     |
|                    |                                                                 |
| Channel Bandwidths | LTE Band 2 (PCS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz  |
|                    | LTE Band 4 (AWS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz  |
|                    | LTE Band 5 (Cell) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz                 |
|                    | LTE Band 12 1.4 MHz, 3 MHz, 5 MHz, 10 MHz                       |
|                    | LTE Band 13 5 MHz, 10 MHz                                       |
|                    | LTE Band 17 5 MHz, 10 MHz                                       |
|                    | LTE Band 25 (PCS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz |
|                    | LTE Band 26 (Cell) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz        |
|                    | LTE TDD Band 41 5 MHz, 10 MHz, 15 MHz, 20 MHz                   |
|                    | LTE Band 66 (AWS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz |

| Ch. No.& Freq.(MHz) | Low     | Mid             | High            |
|---------------------|---------|-----------------|-----------------|
| LTE Band 2 (PCS)    | 1.4 MHz | 1 850.7 (18607) | 1 880.0 (18900) |
|                     | 3 MHz   | 1 851.5 (18615) | 1 880.0 (18900) |
|                     | 5 MHz   | 1 852.5 (18625) | 1 880.0 (18900) |
|                     | 10 MHz  | 1 855.0 (18650) | 1 880.0 (18900) |
|                     | 15 MHz  | 1 857.5 (18675) | 1 880.0 (18900) |
|                     | 20 MHz  | 1 860.0 (18700) | 1 880.0 (18900) |
| LTE Band 4 (AWS)    | 1.4 MHz | 1 710.7 (19957) | 1 732.5 (20175) |
|                     | 3 MHz   | 1 711.5 (19965) | 1 732.5 (20175) |
|                     | 5 MHz   | 1 712.5 (19975) | 1 732.5 (20175) |
|                     | 10 MHz  | 1 715.0 (20000) | 1 732.5 (20175) |
|                     | 15 MHz  | 1 717.5 (20025) | 1 732.5 (20175) |
|                     | 20 MHz  | 1 720.0 (20050) | 1 732.5 (20175) |
| LTE Band 5 (Cell)   | 1.4 MHz | 824.7 (20407)   | 836.5 (20525)   |
|                     | 3 MHz   | 825.5 (20415)   | 836.5 (20525)   |
|                     | 5 MHz   | 826.5 (20425)   | 836.5 (20525)   |
|                     | 10 MHz  | 829.0 (20450)   | 836.5 (20525)   |
| LTE Band 12         | 1.4 MHz | 699.7 (23017)   | 707.5 (23095)   |
|                     | 3 MHz   | 700.5 (23025)   | 707.5 (23095)   |
|                     | 5 MHz   | 701.5 (23035)   | 707.5 (23095)   |
|                     | 10 MHz  | 704.0 (23060)   | 707.5 (23095)   |
| LTE Band 13         | 5 MHz   | 779.5 (23205)   | 782 (23230)     |
|                     | 10 MHz  |                 | 782 (23230)     |
| LTE Band 17         | 5 MHz   | 706.5 (23755)   | 710 (23790)     |
|                     | 10 MHz  |                 | 710 (23790)     |
| LTE Band 25(PCS)    | 1.4 MHz | 1 850.7 (26047) | 1 882.5 (26365) |
|                     | 3 MHz   | 1 851.5 (26055) | 1 882.5 (26365) |
|                     | 5 MHz   | 1 852.5 (26065) | 1 882.5 (26365) |
|                     | 10 MHz  | 1 855 (26090)   | 1 882.5 (26365) |
|                     | 15 MHz  | 1 857.5 (26115) | 1 882.5 (26365) |
|                     | 20 MHz  | 1 860 (26140)   | 1 882.5 (26365) |
| LTE Band 26 (Cell)  | 1.4 MHz | 814.7 (26697)   | 831.5 (26865)   |
|                     | 3 MHz   | 815.5 (26705)   | 831.5 (26865)   |
|                     | 5 MHz   | 816.5 (26715)   | 831.5 (26865)   |
|                     | 10 MHz  | 819.0 (26740)   | 831.5 (26865)   |
|                     | 15 MHz  | 821.5 (26765)   | 831.5 (26865)   |

| Ch. No.& Freq.(MHz)                                              |         | Low                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                          | Mid            |               | High             |  |
|------------------------------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|------------------|--|
| LTE Band 66<br>(AWS)                                             | 1.4 MHz | 1 710.7 (131979)                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                          | 1 745 (132322) |               | 1 779.3 (132665) |  |
|                                                                  | 3 MHz   | 1 711.5 (131987)                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                          | 1 745 (132322) |               | 1 778.5 (132657) |  |
|                                                                  | 5 MHz   | 1 712.5 (131997)                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                          | 1 745 (132322) |               | 1 777.5 (132647) |  |
|                                                                  | 10 MHz  | 1 715.0 (132022)                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                          | 1 745 (132322) |               | 1 775.0 (132622) |  |
|                                                                  | 15 MHz  | 1 717.5 (132047)                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                          | 1 745 (132322) |               | 1 772.5 (132597) |  |
|                                                                  | 20 MHz  | 1 720.0 (132072)                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                          | 1 745 (132322) |               | 1 770.0 (132572) |  |
| LTE TDD Band<br>41                                               | 5 MHz   | 2506.0(39750)                                                                                                                                                                                                                                                                                                                           | 2549.5(40185)                                                                                                                                            | 2593.0(40620)  | 2636.5(41055) | 2680.0(41490)    |  |
|                                                                  | 10 MHz  | 2506.0(39750)                                                                                                                                                                                                                                                                                                                           | 2549.5(40185)                                                                                                                                            | 2593.0(40620)  | 2636.5(41055) | 2680.0(41490)    |  |
|                                                                  | 15 MHz  | 2506.0(39750)                                                                                                                                                                                                                                                                                                                           | 2549.5(40185)                                                                                                                                            | 2593.0(40620)  | 2636.5(41055) | 2680.0(41490)    |  |
|                                                                  | 20 MHz  | 2506.0(39750)                                                                                                                                                                                                                                                                                                                           | 2549.5(40185)                                                                                                                                            | 2593.0(40620)  | 2636.5(41055) | 2680.0(41490)    |  |
| UE Category                                                      |         | LTE Rel.15, DL: Category 20, UL: Category 18                                                                                                                                                                                                                                                                                            |                                                                                                                                                          |                |               |                  |  |
| HPUE Power Class                                                 |         | TDD 41 Power Class 3 :(Duty: 63.3%) Power Class 2 : (Duty:43.3%)                                                                                                                                                                                                                                                                        |                                                                                                                                                          |                |               |                  |  |
| Modulations Supported in UL                                      |         | QPSK, 16QAM, 64QAM, 256QAM                                                                                                                                                                                                                                                                                                              |                                                                                                                                                          |                |               |                  |  |
| LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3 |         | Yes                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                          |                |               |                  |  |
| A-MPR disabled for SAR Testing.                                  |         | Yes                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                          |                |               |                  |  |
| LTE Carrier Aggregation                                          |         | Up-Link CA                                                                                                                                                                                                                                                                                                                              | This device dose not supports Up-Link Carrier aggregation.in US.                                                                                         |                |               |                  |  |
|                                                                  |         | Down-Link CA                                                                                                                                                                                                                                                                                                                            | This device supports Inter-band & Intra-band DL DL-link Carrier aggregations only.<br>Detaled information of Down-Link CA are included in the section 11 |                |               |                  |  |
| LTE Release information                                          |         | This device does not support full CA features on 3GPP Release 15. It supports carrier aggregation, downlink MIMO. All other uplink communications are identical to te release 8 specifications. The following LTE Release 15 Features are not supported: Relay, Hetnet, Enhanced eICI, MDH, cross-carrier Scheduling, Enhanced SC-FDMA. |                                                                                                                                                          |                |               |                  |  |

## 4.5 DUT Antenna Locations

The overall dimensions of this device are > 9 X 5 cm. A diagram showing device antenna can be found in SAR\_setup\_photos. Since the diagonal dimension of this device is > 160 mm and < 200 mm, it is considered a “phablet”.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering. Therefore, SAR test was performed for additional simultaneous transmissions.

Head and Bluetooth Tethering SAR were evaluated for BT BR tethering applications.

| Mode               | Rear | Front | Left | Right | Bottom | Top |
|--------------------|------|-------|------|-------|--------|-----|
| GSM/GPRS/EDGE 850  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| GSM/GPRS/EDGE 1900 | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| UMTS850            | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| UMTS1700           | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| UMTS1900           | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 2 (PCS)   | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 4 (AWS)   | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 5 (Cell)  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 12        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 13        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 17        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 25 (PCS)  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 26 (Cell) | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE TDD Band 41    | Yes  | Yes   | No   | Yes   | Yes    | No  |
| LTE Band 66        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| 2.4 GHz WLAN       | Yes  | Yes   | Yes  | No    | No     | Yes |
| 5 GHz WLAN         | Yes  | Yes   | Yes  | No    | No     | Yes |
| Bluetooth          | Yes  | Yes   | Yes  | No    | No     | Yes |

Particular EUT edges were not required to be evaluated for Bluetooth Tethering and Hotspot SAR if the edges were > 25 mm from the transmitting antenna according to FCC KDB 941225 D06v02r01 on page 2.

The distance between the transmit antennas and the edges of the device are included in the filing.

- Note: All test configurations are based on front view position.

## 4.6 Near Field Communications (NFC) Antenna and S-PEN considerations

This EUT has NFC operations. The NFC antenna is integrated into the device for this model. Therefore, all SAR tests were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the NFC antenna can be found in SAR\_Setup\_photos.

This EUT has S-PEN operations. The S-PEN is attached inside the EUT during all SAR testing.

## 4.7 SAR Summation Scenario

According to FCC KDB 447498 D01v06, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown below paths and are mode in same rectangle to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB 447498 D01v06.

| Simultaneous Transmission Scenarios                         |      |           |         |           |
|-------------------------------------------------------------|------|-----------|---------|-----------|
| Applicable Combination                                      | Head | Body-Worn | Hotspot | Extremity |
| GSM Voice + 2.4 GHz WiFi SISO                               | Yes  | Yes       | N/A     | Yes       |
| GSM Voice + 5 GHz WiFi SISO                                 | Yes  | Yes       | N/A     | Yes       |
| GSM Voice + 2.4 GHz WiFi MIMO                               | Yes  | Yes       | N/A     | Yes       |
| GSM Voice + 5 GHz WiFi MIMO                                 | Yes  | Yes       | N/A     | Yes       |
| GSM Voice + 2.4 GHz WiFi SISO +5 GHz WiFi SISO              | Yes  | Yes       | N/A     | Yes       |
| GSM Voice + 2.4 GHz WiFi RSDB MIMO +5 GHz WiFi RSDB MIMO    | Yes  | Yes       | N/A     | Yes       |
| GSM Voice + 5 GHz WiFi SISO + Bluetooth                     | Yes# | Yes       | N/A     | Yes       |
| GSM Voice + 5 GHz WiFi MIMO + Bluetooth                     | Yes# | Yes       | N/A     | Yes       |
| GSM Voice + Bluetooth                                       | Yes# | Yes       | N/A     | Yes       |
| GSMGPRS/EDGE + 2.4 GHz WiFi SISO                            | N/A  | N/A       | Yes     | Yes       |
| GSMGPRS/EDGE + 5 GHz WiFi SISO                              | N/A  | N/A       | Yes     | Yes       |
| GSMGPRS/EDGE + 2.4 GHz WiFi MIMO                            | N/A  | N/A       | Yes     | Yes       |
| GSMGPRS/EDGE + 5 GHz WiFi MIMO                              | N/A  | N/A       | Yes     | Yes       |
| GSMGPRS/EDGE + 2.4 GHz WiFi SISO +5 GHz WiFi SISO           | N/A  | N/A       | Yes     | Yes       |
| GSMGPRS/EDGE + 2.4 GHz WiFi RSDB MIMO +5 GHz WiFi RSDB MIMO | N/A  | N/A       | Yes     | Yes       |
| GSMGPRS/EDGE + 5 GHz WiFi SISO + Bluetooth                  | N/A  | N/A       | Yes#    | Yes       |
| GSMGPRS/EDGE + 5 GHz WiFi MIMO + Bluetooth                  | N/A  | N/A       | Yes#    | Yes       |
| GSMGPRS/EDGE + Bluetooth                                    | N/A  | N/A       | Yes#    | Yes       |
| UMTS+ 2.4 GHz WiFi SISO                                     | Yes  | Yes       | Yes     | Yes       |
| UMTS + 5 GHz WiFi SISO                                      | Yes  | Yes       | Yes     | Yes       |
| UMTS + 2.4 GHz WiFi MIMO                                    | Yes  | Yes       | Yes     | Yes       |
| UMTS + 5 GHz WiFi MIMO                                      | Yes  | Yes       | Yes     | Yes       |
| UMTS + 2.4 GHz WiFi SISO +5 GHz WiFi SISO                   | Yes  | Yes       | Yes     | Yes       |
| UMTS + 2.4 GHz WiFi RSDB MIMO +5 GHz WiFi RSDB MIMO         | Yes  | Yes       | Yes     | Yes       |
| UMTS + 5 GHz WiFi SISO + Bluetooth                          | Yes# | Yes       | Yes#    | Yes       |
| UMTS + 5 GHz WiFi MIMO + Bluetooth                          | Yes# | Yes       | Yes#    | Yes       |
| UMTS + Bluetooth                                            | Yes# | Yes       | Yes#    | Yes       |
| LTE+ 2.4 GHz WiFi SISO                                      | Yes  | Yes       | Yes     | Yes       |
| LTE + 5 GHz WiFi SISO                                       | Yes  | Yes       | Yes     | Yes       |
| LTE + 2.4 GHz WiFi MIMO                                     | Yes  | Yes       | Yes     | Yes       |
| LTE + 5 GHz WiFi MIMO                                       | Yes  | Yes       | Yes     | Yes       |
| LTE + 2.4 GHz WiFi SISO +5 GHz WiFi SISO                    | Yes  | Yes       | Yes     | Yes       |
| LTE + 2.4 GHz WiFi RSDB MIMO +5 GHz WiFi RSDB MIMO          | Yes  | Yes       | Yes     | Yes       |
| LTE + 5 GHz WiFi SISO + Bluetooth                           | Yes# | Yes       | Yes#    | Yes       |
| LTE + 5 GHz WiFi MIMO + Bluetooth                           | Yes# | Yes       | Yes#    | Yes       |
| LTE + Bluetooth                                             | Yes# | Yes       | Yes#    | Yes       |

1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. All licensed modes share the same antenna path and cannot transmit simultaneously.

3. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario
4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table
5. 5.5GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, and U-NII-2C were not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. Each WLAN antenna can transmit independently or together when operating with MIMO.
7. This device supports VOLTE.
8. This device supports VOWIFI.
9. This device supports Bluetooth Tethering.

## 4.8 SAR Test Considerations

### 4.8.1 WiFi

Since wireless router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A & U-NII-2C WiFi, WiFi Hotspot SAR test and combinations are considered only 2.4 GHz and U-NII-3 for SAR with respect to wireless router configurations according to FCC KDB 941225 D06v02r01.

Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg for 1g SAR and is less than 3.0 W/kg for 10g SAR, SAR is not required for U-NII-1 band according to FCC KDB 248227D01v02r02.

This device supports IEEE 802.11 ax with the following features:

- a) Up to 80 MHz Bandwidth only
- b) No aggregate channel configurations
- c) 2Tx Antenna output
- d) 256 QAM is supported
- e) TDWR channels are supported.
- f) Straddle channels are supported
- g) Band gap channels are supported

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

Per April 2019 TCB Workshop Notes, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

#### 4.8.2 Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

LTE SAR for the higher modulations and lower bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth; and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r05.

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

This device supports 64QAM and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is  $\leq \frac{1}{2}$  dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is  $\leq 1.45$ W/kg, per Section 5.2.4 of FCC KDB Publication 941225 D05v02r05..

This device supports downlink 4x4 MIMO operations for some LTE Bands. Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of LTE Band falls completely within an LTE Band with a larger transmission frequency range, both LTE bands have the same target power or the band with the larger transmission frequency range has a higher target power and both LTE bands share the same transmission path and signal characteristics, SAR was only tested for the band with the larger transmission frequency range.

LTE Band 17(706.5 MHz ~ 713.5 MHz) is covered by LTE Band 12 (699.7 MHz ~ 715.3 MHz), LTE Band 4 (1 710.7 MHz ~ 1 754.3 MHz) is covered by LTE Band 66 (1 710.7 MHz ~ 1 779.3 MHz) each both LTE bands have the same target powers

This device support both Power class 2(PC2) and Power Class 3 (PC3) for LTE band 41. Per May 2017 TCB workshop Notes, SAR test were performed with Power Class 3(given the specific UL/DL Limitations for Power Class 2). Additionally, SAR testing for the power class condition was evaluated for the highest configuration in Power class 3 for each test configuration to confirm he results were scalable linearly.

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB publication 941225 D05A v01r02, SAR for LTE DL CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The Highest available duty cycle for Power Class 2 operations is 43.3% using UL-DL configuration 1. Per May TCB Workshop notes, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was

additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions.

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

Per FCC KDB 941225 D01v03r01, 12.2 kbps RMC is the primary mode and HSPA (HSUPA/HSDPA with RMC) is the secondary mode.

Per FCC KDB 941225 D01v03r01, The SAR test exclusion is applied to the secondary mode by the following equation.

$$\text{Adjusted SAR} = \text{Highest Reported SAR} \times \frac{\text{Secondary Max tune-up (mW)}}{\text{Primary Max tune-up (mW)}} \leq 1.2 \text{ W/kg.}$$

Based on the highest Reported SAR, the secondary mode is not required.

Per FCC KDB 690783 1 D01 SAR Listings on Grants v01r03 and KDB 447498 D01 General RF Exposure Guidance v06 The SAR numbers listed must be consistent with the highest reported test results required by the published RF exposure KDB procedures. When the measured SAR is not at the maximum tune-up tolerance limit or maximum output power allowed for production units, the measured results are scaled to the maximum conditions to determine compliance; the scaled results are referred to as the reported SAR.

$$\text{The Reported SAR} = \text{The Measured SAR} \times \frac{\text{Maximum tune-up (mW)}}{\text{Measured Conducted Power(mW)}}$$

The Reported SAR for WLAN and Bluetooth

$$\text{The Reported SAR} = \text{The Measured SAR} \times \frac{\text{Maximum tune-up (mW)}}{\text{Measured Conducted Power(mW)}} \times \text{Duty factor}$$

## 5. Introduction

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on Aug. 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York 10017. The measurement procedure described in IEEE/ANSI C95.3-1992 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring SAR due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields," NCRP Report No. 86 NCRP, 1986, Bethesda, MD 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

### SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density ( $\rho$ ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body.

$$SAR = \frac{d}{dt} \left( \frac{dU}{dm} \right)$$

Figure 1. SAR Mathematical Equation  
SAR is expressed in units of Watts per Kilogram (W/kg)

$$SAR = \sigma E^2 / \rho$$

Where:

$\sigma$  = conductivity of the tissue-simulant material (S/m)  
 $\rho$  = mass density of the tissue-simulant material (kg/m<sup>3</sup>)  
 $E$  = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

## 6. Description of test equipment

### 6.1 SAR MEASUREMENT SETUP

These measurements are performed using the DASY4 automated dosimetric assessment system. It is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Staubli), robot controller, Pentium III computer, near-field probe, probe alignment sensor, and the generic twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Figure.2).

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC with Windows XP or Windows 7 is working with SAR Measurement system DASY4 & DASY5, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

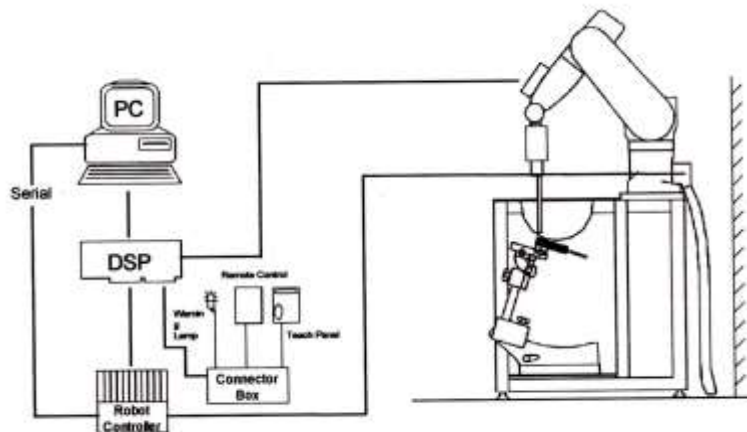


Figure 2. HCT SAR Lab. Test Measurement Set-up

The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer. The system is described in detail in.

## 7. SAR Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013.

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 table 4-1 & IEEE 1528-2013.
2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned area, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.
3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)
  - a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
  - b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
  - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

Area scan and zoom scan resolution setting follow KDB 865664 D01v01r04 quoted below.

|                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |                                                                                       | ≤ 3 GHz                                                                                                                                                                                                                                                           | > 3 GHz                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface                                                                                                                                                                                                                                                                                                                             |                                      |                                                                                       | 5±1 mm                                                                                                                                                                                                                                                            | $\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$ |
| Maximum probe angle from probe axis to phantom surface normal at the measurement location                                                                                                                                                                                                                                                                                                                                          |                                      |                                                                                       | 30°±1°                                                                                                                                                                                                                                                            | 20°±1°                                                     |
| Maximum area scan Spatial resolution: Δx <sub>Area</sub> , Δy <sub>Area</sub>                                                                                                                                                                                                                                                                                                                                                      |                                      |                                                                                       | ≤ 2 GHz: ≤15 mm<br>2-3 GHz: ≤12 mm                                                                                                                                                                                                                                | 3-4 GHz: ≤12 mm<br>4-6 GHz: ≤10 mm                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |                                                                                       | When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device. |                                                            |
| Maximum zoom scan Spatial resolution: Δx <sub>zoom</sub> , Δy <sub>zoom</sub>                                                                                                                                                                                                                                                                                                                                                      |                                      |                                                                                       | ≤ 2 GHz: ≤8mm<br>2-3 GHz: ≤5mm*                                                                                                                                                                                                                                   | 3-4 GHz: ≤5 mm*<br>4-6 GHz: ≤4 mm*                         |
| Maximum zoom scan Spatial resolution normal to phantom surface                                                                                                                                                                                                                                                                                                                                                                     | uniform grid: Δz <sub>zoom</sub> (n) |                                                                                       | ≤ 5 mm                                                                                                                                                                                                                                                            | 3-4 GHz: ≤4 mm<br>4-5 GHz: ≤3 mm<br>5-6 GHz: ≤2 mm         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                    | graded grid                          | Δz <sub>zoom</sub> (1): between 1 <sup>st</sup> two Points closest to phantom surface | ≤ 4 mm                                                                                                                                                                                                                                                            | 3-4 GHz: ≤3 mm<br>4-5 GHz: ≤2.5 mm<br>5-6 GHz: ≤2 mm       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      | Δz <sub>zoom</sub> (n>1): between subsequent Points                                   | ≤1.5·Δz <sub>zoom</sub> (n-1)                                                                                                                                                                                                                                     |                                                            |
| Minimum zoom scan volume                                                                                                                                                                                                                                                                                                                                                                                                           | x, y, z                              |                                                                                       | ≥ 30 mm                                                                                                                                                                                                                                                           | 3-4 GHz: ≥28 mm<br>4-5 GHz: ≥25 mm<br>5-6 GHz: ≥22 mm      |
| <p>Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.</p> <p>* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</p> |                                      |                                                                                       |                                                                                                                                                                                                                                                                   |                                                            |

## 8. Description of Test Position

### 8.1 EAR REFERENCE POINT

Figure 8-2 shows the front, back and side views of the SAM phantom. The center-of-mouth reference point is labeled “M”, the left ear reference point (ERP) is marked “LE”, and the right ERP is marked “RE.” Each ERP is on the B-M (back-mouth) line located 15 mm behind the entrance-to-ear-canal (EEC) point, as shown in Figure 6-1. The Reference Plane is defined as passing through the two ear reference point and point M. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (See Figure 5-1), Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning.

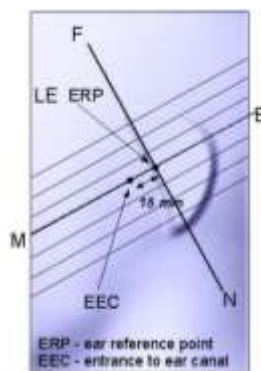


Figure 8-1  
Close-up side view of ERP

### 8.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The device under test was placed in a normal operating position with the acoustic output located along the “vertical centerline” on the front of the device aligned to the “ear reference point”(see Figure 8-3). The acoustic output was then located at the same level as the center of the ear reference point. The device under test was positioned so that the “vertical centerline” was bisecting the front surface of the handset at its top and bottom edges, positioning the “ear reference point” on the outer surface of the both the left and right head phantoms on the ear reference point.



Figure 8-2  
Front, back and side views of SAM Twin Phantom

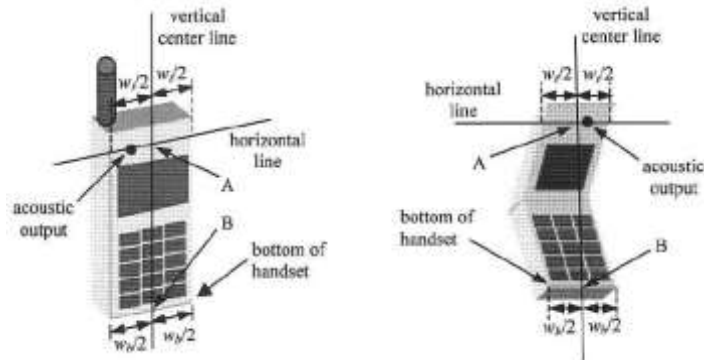


Figure 6-3. Handset vertical and horizontal reference lines

## 8.3 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameter; relative permittivity  $\epsilon=3$  and loss tangent  $\sigma=0.02$ .

## 8.4 Position for cheek

Figure 6.4. shows cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

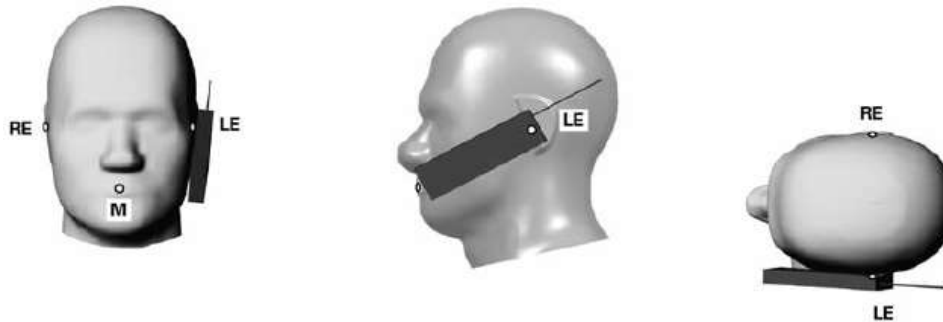


Figure 8.4 Cheek/ Touch position of the wireless device

## 8.5 Definition of the “tilted” position

Figure 6.5. shows tilted position. Place the device in the cheek position. Then while maintaining the orientation of the device, retract the device parallel to the reference plane far enough away from the phantom to enable a rotation of the device by 15°.



Figure 8.5. Tilt 15° position of the wireless device

## 8.6 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-dips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6-6). Per FCC KDB Publication 648474 D04v01r03 Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in Body-worn accessories. The Body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for Body-worn accessory SAR compliance, without a headset connected to it.. When the reported SAR for a body- worn accessory, measured without a headset connected to the handset, is  $> 1.2 \text{ W/kg}$ , the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.



Figure 8-6  
Sample Body-Worn Diagram

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-dip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

## 8.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W ≥ 9cm x 5 cm) are based on a composite test separation distance of 10 mm from the front back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the Body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some Body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The Portable Hotspot feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

## 8.8 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions: i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1-g body and 10-g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear. the phablets procedures outlined in KDB Publication 648474 D04 v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worn accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna ≤ 25 mm from that surface or edge, in direct contact with the phantom, for 10-g SAR. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1-g SAR > 1.2 W/kg.

## 8.9 Additional Test Positions due to Proximity Conditions

This device uses a sensor to reduce output powers in extremity (hand-held) use conditions.

When the sensor detects a user is touching the device on or near to the antenna the device reduces the maximum allowed output power. However, the proximity sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, an additional exposure condition is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level.

FCC KDB 616217 D04 v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional exposure conditions. The smallest separation distance determined by the sensor triggering and sensor coverage for each applicable edge, minus 1 mm. was used as the test separation distance for SAR testing. Sensor triggering distance summary data is included in below table.

| Wireless technologies                                                        | Position | §6.2<br>Triggering<br>Distance | §6.3<br>Coverage | §6.4<br>Tilt Angle | Worst case<br>distance for<br>Phablet SAR |
|------------------------------------------------------------------------------|----------|--------------------------------|------------------|--------------------|-------------------------------------------|
| GSM 1900/<br>UMTS B2/B4<br>LTE/B2/B4/B25/B66<br>LTE 41(PC3)<br>LTE 41 (HUPE) | Rear     | 9                              | N/A              | N/A                | 8                                         |
|                                                                              | Front    | 7                              | N/A              | N/A                | 6                                         |
|                                                                              | Bottom   | 13                             | N/A              | N/A                | 12                                        |

## 8.10 Bluetooth tethering Configurations

Per May 2017 TCBC Workshop documents When Bluetooth tethering applies ,simultaneous transmission SAR needs consideration.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering.

Therefore, SAR test was performed for additional simultaneous transmissions.

Head and Bluetooth tethering SAR were evaluated for BT BR tethering applications.

## 9. RF Exposure Limits

| HUMAN EXPOSURE                                         | UNCONTROLLED ENVIRONMENT<br>General Population<br>(W/kg) or (mW/g) | CONTROLLED ENVIRONMENT<br>Occupational<br>(W/kg) or (mW/g) |
|--------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------|
| SPATIAL PEAK SAR *<br>(Partial Body)                   | 1.6                                                                | 8.0                                                        |
| SPATIAL AVERAGE SAR **<br>(Whole Body)                 | 0.08                                                               | 0.4                                                        |
| SPATIAL PEAK SAR ***<br>(Hands / Feet / Ankle / Wrist) | 4.0                                                                | 20.0                                                       |

### NOTES:

\* The Spatial Peak value of the SAR averaged over any 1 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

\*\* The Spatial Average value of the SAR averaged over the whole-body.

\*\*\* The Spatial Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

**Uncontrolled Environments** are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

**Controlled Environments** are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

## 10. FCC SAR General Measurement Procedures

Power Measurements for licensed transmitters are performed using a base simulator under digital average power.

### 10.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as Reported SAR. The highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

### 10.2 3G SAR Test Reduction Procedure

#### 10.2.1 GSM, GPRS AND EDGE

The following procedures may be considered for each frequency band to determine SAR test reduction for devices operating in GSM/GPRS/EDGE modes to demonstrate RF exposure compliance. GSM voice mode transmits with 1 time-slot. GPRS and EDGE may transmit up to 4 time slots in the 8 time-slot frame according to the multi-slot class implemented in a device.

#### 10.2.2 SAR Test Reduction

In FCC KDB 941225 D01v03r01, certain transmission modes within a frequency band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is  $\leq 0.25$  dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is  $\leq 1.2$  W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested

#### 10.2.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB 941225 D01v03r01-3G SAR Measurement Procedures. The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to Check for power drifts. If conducted Power deviations of more than 5 % occurred, the tests were repeated.

## 10.3 SAR Measurement Conditions for WCDMA

### 10.3.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in sec. 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

### 10.3.2 Body SAR measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all “1s”. the 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using and applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported SAR configuration in 12.2 kbps RMC.

### 10.3.3 SAR Measurements with Rel. 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using and FRC with H-SET 1 in Sub-test and a 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to release 6 HSPA test procedures. 8.4.5 SAR Measurement with Rel.6 HSUPA The 3G SAR test Reduction Procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, Using H-Set 1 and QPSK for FRC and a 12.2kbps RMC configured in Test Loop Mode 1 and Power Control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

### 10.3.4 SAR Measurements with Rel. 6 HSUPA

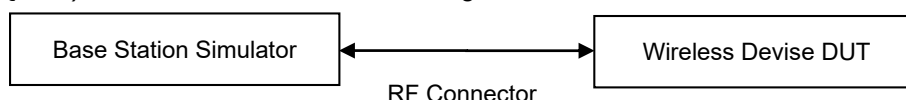
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

### 10.3.5 DC-HSDPA

SAR is required for Rel.8 DC-HSDPA when SAR is required for Rel.5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in table C.8.1.12 of 3GPP TS34.121-1 to determine SAR test reduction. Primary and secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

#### DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



## 10.4 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r05 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluation SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

### 10.4.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

### 10.4.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36. 101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

### 10.4.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

### 10.4.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

- a. Per sec 4.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
  - i. The required channel and offset combination with the highest maximum output power is required for SAR.
  - ii. When the reported SAR is  $\leq 0.8$  W/Kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
  - iii. When the reported SAR for a required test channel is  $> 1.45$  W/kg, SAR is required for all RB offset configurations for that channel.
- b. Per Sec 4.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Sec 4.2.1.
- c. Per Sec. 4.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is  $< 0.8$  W/kg.
- d. Per Sec. 4.2.4 and 4.3, SAR test for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sec. 4.2.1 through 4.2.3 is less than or equal to 1/2 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is  $< 1.45$  W/Kg.

### 10.4.5 Downlink Carrier Aggregation

Conducted power measurements with LTE Carrier aggregation (CA) downlink only active are made in accordance to KDB publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. For every supported combination of downlink only carrier aggregation, additional conducted output Powers are measured with downlink carrier aggregation active for the configuration with highest measured maximum conducted power with the downlink carrier aggregation inactive measured among the channel bandwidth, modulation and RB combinations in each frequency band. Per FCC KDB Publication

941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25dB higher than the average output power with downlink only carrier aggregation inactive.

#### 10.4.6 LTE(TDD) Considerations

According to KDB 941225 D05v02r05, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

SAR was tested with the highest transmission duty factor (63.33 %) using Uplink-downlink configuration 0 and Special subframe configuration 6. LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special sub frame configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

| Special subframe configuration | Normal cyclic prefix in downlink |                                |                                  | Extended cyclic prefix in downlink |                                |                                  |
|--------------------------------|----------------------------------|--------------------------------|----------------------------------|------------------------------------|--------------------------------|----------------------------------|
|                                | DwPTS                            | UpPTS                          |                                  | DwPTS                              | UpPTS                          |                                  |
|                                |                                  | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |                                    | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |
| 0                              | $6592 \cdot T_s$                 | $2192 \cdot T_s$               | $2560 \cdot T_s$                 | $7680 \cdot T_s$                   | $2192 \cdot T_s$               | $2560 \cdot T_s$                 |
| 1                              | $19760 \cdot T_s$                |                                |                                  | $20480 \cdot T_s$                  |                                |                                  |
| 2                              | $21952 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 3                              | $24144 \cdot T_s$                |                                |                                  | $25600 \cdot T_s$                  |                                |                                  |
| 4                              | $26336 \cdot T_s$                | $4384 \cdot T_s$               | $5120 \cdot T_s$                 | $7680 \cdot T_s$                   | $4384 \cdot T_s$               | $5120 \cdot T_s$                 |
| 5                              | $6592 \cdot T_s$                 |                                |                                  | $20480 \cdot T_s$                  |                                |                                  |
| 6                              | $19760 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 7                              | $21952 \cdot T_s$                |                                |                                  | $12800 \cdot T_s$                  |                                |                                  |
| 8                              | $24144 \cdot T_s$                |                                |                                  | -                                  |                                |                                  |
| 9                              | $13168 \cdot T_s$                |                                |                                  | -                                  |                                |                                  |

Calculated Duty Cycle – Extended cyclic prefix in uplink  $\times (T_s) \times$  no of S + no of U

Table 4.2-2: Uplink-downlink configurations

| Uplink-downlink configuration | Downlink-to-Uplink Switch-point periodicity | Subframe number |   |   |   |   |   |   |   |   |   |
|-------------------------------|---------------------------------------------|-----------------|---|---|---|---|---|---|---|---|---|
|                               |                                             | 0               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0                             | 5 ms                                        | D               | S | U | U | U | D | S | U | U | U |
| 1                             | 5 ms                                        | D               | S | U | U | D | D | S | U | U | D |
| 2                             | 5 ms                                        | D               | S | U | D | D | D | S | U | D | D |
| 3                             | 10 ms                                       | D               | S | U | U | U | D | D | D | D | D |
| 4                             | 10 ms                                       | D               | S | U | U | D | D | D | D | D | D |
| 5                             | 10 ms                                       | D               | S | U | D | D | D | D | D | D | D |
| 6                             | 5 ms                                        | D               | S | U | U | U | D | S | U | U | D |

Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:

Calculated Duty Cycle =  $(5120 \times (1/(15000 \times 2048))) \times 2 + 0.006)/0.01 = 63.33 \%$

Where

$T_s = 1/(15000 \times 2048)$  seconds

HPUE :

Calculated Duty Cycle for Uplink-Downlink Configuration 1:

Calculated Duty Cycle =  $5120 \times (1/(15000 \times 2048)) \times 2 + 0.004)/0.01 = 43.33 \%$

#### 10.4.7 The Call Box Setup for LTE(TDD)

When you Want to Test for LTE TDD, Please Change Frame Structure TDD and TDD Uplink Downlink Configuration 0 and Special Subframe Configuration 6.

2018/01/08 11:00 Idle( Regist ) Phone-2 W-CDMA Phone-1 LTE

<Fundamental Measurement> Output Main Continuous

Parameter Fundamental UE Report

Reference Signal not found UE Power : -21.5 dBm

Power Measurement (Meas. Count : 11/ 20)

| Parameter     | Avg.  | Max.  | Min.  | Limit                |
|---------------|-------|-------|-------|----------------------|
| TX Power      | ***** | ***** | ***** | dBm 20.3 to 25.7 dBm |
| Channel Power | ***** | ***** | ***** | dBm                  |

Modulation Analysis View (Meas. Count : 1/ 1)

Common Parameter

Test Parameter TX1 - Max. Power(QPSK/1 RB)

Call Processing On Scenario Normal

Frequency

Frame Structure TDD

Channel Bandwidth FDD Hz

UL Channel & Frequency TDD 20 CH = 2593.000000 MHz

DL Channel & Frequency 40620 CH = 2593.000000 MHz

Operation Band 41

Frequency Separation ( 0 )MHz

Level

Input Level 30.0 dBm

Parameter Common Physical Channel Call Processing TX Measurement Setup RX Measurement Setup Fundamental Measurement

1 2 3 4

2018/01/08 11:01 Idle( Regist ) Phone-2 W-CDMA Phone-1 LTE

<Fundamental Measurement> Output Main Continuous

Parameter Fundamental UE Report

Reference Signal not found UE Power : -21.5 dBm

Power Measurement (Meas. Count : 11/ 20)

| Parameter     | Avg.  | Max.  | Min.  | Limit                |
|---------------|-------|-------|-------|----------------------|
| TX Power      | ***** | ***** | ***** | dBm 20.3 to 25.7 dBm |
| Channel Power | ***** | ***** | ***** | dBm                  |

Modulation Analysis View (Meas. Count : 1/ 1)

| MCS Index       | (-)         | (5)         | (0)         | (1,6)       | CFI |
|-----------------|-------------|-------------|-------------|-------------|-----|
| MCS Index (-)   | 5 (QPSK)    | 5 (QPSK)    | 5 (QPSK)    | N/A (-----) | 3   |
| MCS Index (5)   | 5 (QPSK)    | 5 (QPSK)    | 5 (QPSK)    | N/A (-----) | 3   |
| MCS Index (0)   | 5 (QPSK)    | 5 (QPSK)    | 5 (QPSK)    | N/A (-----) | 3   |
| MCS Index (1,6) | N/A (-----) | N/A (-----) | N/A (-----) | N/A (-----) | 3   |

TDD subframe 0 1 2 3 4 5 6 7 8 9

Uplink Downlink Configuration 0 : ( 5ms) D S U U U D S U U U

Special Subframe Configuration 6

Physical Channel Parameter

|              |        |
|--------------|--------|
| PSS Power    | 0.0 dB |
| SSS Power    | 0.0 dB |
| PBCH Power   | 0.0 dB |
| PCFICH Power | 0.0 dB |
| PHICH Power  | 0.0 dB |

Parameter Common Physical Channel Call Processing TX Measurement Setup RX Measurement Setup Fundamental Measurement

1 2 3 4

## 10.5 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

### 10.5.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR system to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92-96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

### 10.5.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is  $> 1.2$  W/kg for 1g SAR or  $> 3.0$  W/kg for 10g SAR. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is  $> 1.2$  W/kg for 1g SAR or  $> 3.0$  W/kg for 10g SAR.

### 10.5.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 GHz – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 GHz – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification.

Unless band gap channels are permanently disabled, SAR must be considered for these channels.

### 10.5.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is  $\leq 0.4$  W/kg for 1g SAR and  $\leq 1.0$  W/kg for 10g SAR, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is  $\leq 0.8$  W/kg for 1g SAR and  $\leq 2.0$  W/kg for 10g SAR or all test positions are measured.

#### 10.5.5 2.4 GHz SAR test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is  $\leq 0.8$  W/kg, no further SAR testing is required for 802.11b DSSS is that exposure configuration.
- 2) When the reported SAR is  $> 0.8$  W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is  $> 1.2$  W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is  $> 1.2$  W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed.

#### 10.5.6 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 GHz and 5 GHz bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate and lowest order 802.11 a/g/n/ac mode. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11 ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

#### 10.5.7 Initial Test Configuration Procedure

For OFDM, in both 2.4 GHz and 5 GHz bands, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, and lowest data rate. If the average RF output powers of the highest identical transmission modes are within 0.25 dB of each other, mid channel of the transmission mode with highest average RF output power is the initial test channel. Otherwise, the channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is  $\leq 0.8$  W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements.

#### 10.5.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position on procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is  $\leq 1.2$  W/kg for 1g SAR and  $\leq 3.0$  W/kg for 10g SAR, no additional SAR tests for the subsequent test configurations are required.

**10.5.9 MIMO SAR Considerations**

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is  $<1.6$  W/kg, no additional SAR Measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

## 11. Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

### Licensed bands

| Test Description       | Test Procedure Used                                                                                                                                 |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Conducted Output Power | <ul style="list-style-type: none"> <li>- KDB 971168 D01 v03r01 - Section 5.2.4</li> <li>- ANSI C63.26-2015 - Section 5.2.1 &amp; 5.2.4.2</li> </ul> |

### Test Overview

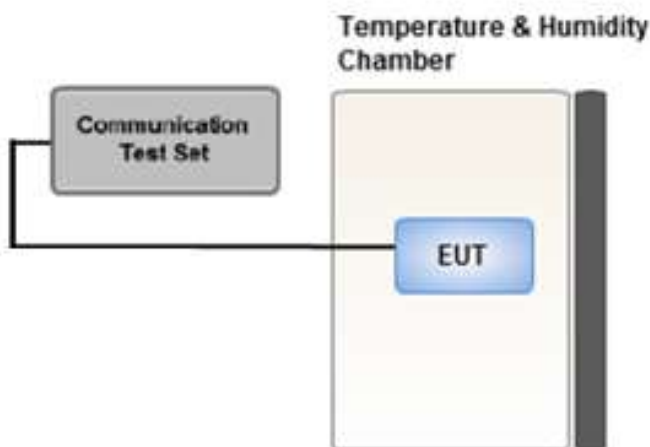
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base station emulator, communications test set, call box, or similar instrumentation that is capable of establishing a communications link with the EUT to enable control over variable parameters (e.g., output power, OBW, etc.).

In some cases, these instruments also include basic digital spectrum analyzer and/or power meter capabilities that can be utilized to measure the RF output power if the specified detectors and requirements can be realized and the measurement functions have been calibrated.

### Test Procedure

1. The RF port of the EUT was connected to the Communication Tester via an RF cable.
2. Conducted average power was measured using a calibrated Radio Communication Tester.

### Test setup



## 11.1 GSM

### 11.1.1 GSM Maximum Conducted Output Power

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                |                |                | EDGE Data (dBm) |                |                |                |
|-------------|-----|-------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
|             |     | GSM   | GPRS 1 TX Slot             | GPRS 2 TX Slot | GPRS 3 TX Slot | GPRS 4 TX Slot | EDGE 1 TX Slot  | EDGE 2 TX Slot | EDGE 3 TX Slot | EDGE 4 TX Slot |
| Maximum     |     | 34.0  | 34.0                       | 32.0           | 30.5           | 29.0           | 27.0            | 25.0           | 23.5           | 22.0           |
| Nominal     |     | 33.0  | 33.0                       | 31.0           | 29.5           | 28.0           | 26.0            | 24.0           | 22.5           | 21.0           |
| GSM 850     | 128 | 33.44 | 33.34                      | 31.45          | 29.61          | 28.94          | 26.78           | 24.93          | 22.98          | 21.82          |
|             | 190 | 33.45 | 33.46                      | 31.45          | 29.65          | 28.78          | 26.71           | 24.98          | 23.14          | 21.94          |
|             | 251 | 33.46 | 33.42                      | 31.34          | 29.66          | 28.76          | 26.82           | 24.94          | 23.02          | 21.85          |
| Maximum     |     | 31.0  | 31.0                       | 28.5           | 26.5           | 25.0           | 26.0            | 24.0           | 22.5           | 21.0           |
| Nominal     |     | 30.0  | 30.0                       | 27.5           | 25.5           | 24.0           | 25.0            | 23.0           | 21.5           | 20.0           |
| GSM 1900    | 512 | 30.59 | 30.61                      | 27.49          | 25.80          | 24.00          | 25.82           | 23.70          | 21.95          | 20.46          |
|             | 661 | 30.61 | 30.71                      | 27.81          | 26.12          | 24.95          | 25.95           | 23.98          | 22.26          | 20.68          |
|             | 810 | 30.57 | 30.54                      | 27.36          | 25.58          | 24.42          | 25.63           | 23.45          | 21.88          | 20.28          |

GSM Conducted output powers (Burst-Average)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                |                |                | EDGE Data (dBm) |                |                |                |
|-------------|-----|-------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
|             |     | GSM   | GPRS 1 TX Slot             | GPRS 2 TX Slot | GPRS 3 TX Slot | GPRS 4 TX Slot | EDGE 1 TX Slot  | EDGE 2 TX Slot | EDGE 3 TX Slot | EDGE 4 TX Slot |
| Maximum     |     | 24.97 | 24.97                      | 25.98          | 26.24          | 25.99          | 17.97           | 18.98          | 19.24          | 18.99          |
| Nominal     |     | 23.97 | 23.97                      | 24.98          | 25.24          | 24.99          | 16.97           | 17.98          | 18.24          | 17.99          |
| GSM 850     | 128 | 24.41 | 24.31                      | 25.43          | 25.35          | 25.93          | 17.75           | 18.91          | 18.72          | 18.81          |
|             | 190 | 24.42 | 24.43                      | 25.43          | 25.39          | 25.77          | 17.68           | 18.96          | 18.88          | 18.93          |
|             | 251 | 24.43 | 24.39                      | 25.32          | 25.40          | 25.75          | 17.79           | 18.92          | 18.76          | 18.84          |
| Maximum     |     | 21.97 | 21.97                      | 22.48          | 22.24          | 21.99          | 16.97           | 17.98          | 18.24          | 17.99          |
| Nominal     |     | 20.97 | 20.97                      | 21.48          | 21.24          | 20.99          | 15.97           | 16.98          | 17.24          | 16.99          |
| GSM 1900    | 512 | 21.56 | 21.58                      | 21.47          | 21.54          | 20.99          | 16.79           | 17.68          | 17.69          | 17.45          |
|             | 661 | 21.58 | 21.68                      | 21.79          | 21.86          | 21.94          | 16.92           | 17.96          | 18.00          | 17.67          |
|             | 810 | 21.54 | 21.51                      | 21.34          | 21.32          | 21.41          | 16.60           | 17.43          | 17.62          | 17.27          |

GSM Conducted output powers (Frame-Average)

#### Note:

Time slot average factor is as follows:

- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

GSM Class : B

GSM voice: Head SAR , Body worn SAR

GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE  
Multi-slot Class 12 with CS 1 (GMSK)



### 11.1.2 GSM Reduced Conducted Output Power (Hotspot mode activated)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                |                |                | EDGE Data (dBm) |                |                |                |
|-------------|-----|-------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
|             |     | GSM   | GPRS 1 TX Slot             | GPRS 2 TX Slot | GPRS 3 TX Slot | GPRS 4 TX Slot | EDGE 1 TX Slot  | EDGE 2 TX Slot | EDGE 3 TX Slot | EDGE 4 TX Slot |
| Maximum     |     | 28.0  | 28.0                       | 25.5           | 23.5           | 22.5           | 26.0            | 23.5           | 22.0           | 20.5           |
| Nominal     |     | 27.0  | 27.0                       | 24.5           | 22.5           | 21.5           | 25.0            | 22.5           | 21.0           | 19.5           |
| GSM 1900    | 512 | 27.40 | 27.47                      | 24.95          | 23.16          | 21.06          | 25.28           | 23.15          | 21.61          | 19.90          |
|             | 661 | 27.72 | 27.71                      | 24.48          | 23.48          | 20.80          | 25.51           | 22.47          | 21.77          | 20.19          |
|             | 810 | 27.30 | 27.31                      | 24.80          | 22.95          | 20.83          | 25.21           | 22.94          | 21.21          | 19.65          |

GSM Conducted output powers (Burst-Average)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                |                |                | EDGE Data (dBm) |                |                |                |
|-------------|-----|-------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
|             |     | GSM   | GPRS 1 TX Slot             | GPRS 2 TX Slot | GPRS 3 TX Slot | GPRS 4 TX Slot | EDGE 1 TX Slot  | EDGE 2 TX Slot | EDGE 3 TX Slot | EDGE 4 TX Slot |
| Maximum     |     | 18.97 | 18.97                      | 19.48          | 19.24          | 19.49          | 16.97           | 17.48          | 17.74          | 17.49          |
| Nominal     |     | 17.97 | 17.97                      | 18.48          | 18.24          | 18.49          | 15.97           | 16.48          | 16.74          | 16.49          |
| GSM 1900    | 512 | 18.37 | 18.44                      | 18.93          | 18.90          | 18.05          | 16.25           | 17.13          | 17.35          | 16.89          |
|             | 661 | 18.69 | 18.68                      | 18.46          | 19.22          | 17.79          | 16.48           | 16.45          | 17.51          | 17.18          |
|             | 810 | 18.27 | 18.28                      | 18.78          | 18.69          | 17.82          | 16.18           | 16.92          | 16.95          | 16.64          |

GSM Conducted output powers (Frame-Average)

#### Note:

Time slot average factor is as follows:

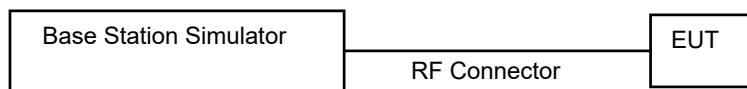
- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

GSM Class : B

GSM voice: Head SAR , Body worn SAR

GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE

Multi-slot Class 12 with CS 1 (GMSK)



### 11.1.3 GSM Reduced Conducted Output Power (Grip Sensor on/ Ear-jack Activated)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                |                |                | EDGE Data (dBm) |                |                |                |
|-------------|-----|-------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
|             |     | GSM   | GPRS 1 TX Slot             | GPRS 2 TX Slot | GPRS 3 TX Slot | GPRS 4 TX Slot | EDGE 1 TX Slot  | EDGE 2 TX Slot | EDGE 3 TX Slot | EDGE 4 TX Slot |
| Maximum     |     | 28.0  | 28.0                       | 25.5           | 23.5           | 22.5           | 26.0            | 23.5           | 22.0           | 20.5           |
| Nominal     |     | 27.0  | 27.0                       | 24.5           | 22.5           | 21.5           | 25.0            | 22.5           | 21.0           | 19.5           |
| GSM 1900    | 512 | 27.37 | 27.46                      | 25.05          | 23.26          | 21.05          | 25.2            | 23.22          | 21.55          | 19.99          |
|             | 661 | 27.66 | 27.79                      | 24.50          | 23.48          | 20.82          | 25.41           | 22.54          | 21.74          | 20.21          |
|             | 810 | 27.23 | 27.28                      | 24.79          | 22.87          | 20.87          | 25.31           | 22.91          | 21.26          | 19.66          |

GSM Conducted output powers (Burst-Average)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                |                |                | EDGE Data (dBm) |                |                |                |
|-------------|-----|-------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
|             |     | GSM   | GPRS 1 TX Slot             | GPRS 2 TX Slot | GPRS 3 TX Slot | GPRS 4 TX Slot | EDGE 1 TX Slot  | EDGE 2 TX Slot | EDGE 3 TX Slot | EDGE 4 TX Slot |
| Maximum     |     | 18.97 | 18.97                      | 19.48          | 19.24          | 19.49          | 16.97           | 17.48          | 17.74          | 17.49          |
| Nominal     |     | 17.97 | 17.97                      | 18.48          | 18.24          | 18.49          | 15.97           | 16.48          | 16.74          | 16.49          |
| GSM 1900    | 512 | 18.34 | 18.43                      | 19.03          | 19.00          | 18.04          | 16.17           | 17.20          | 17.29          | 16.98          |
|             | 661 | 18.63 | 18.76                      | 18.48          | 19.22          | 17.81          | 16.38           | 16.52          | 17.48          | 17.20          |
|             | 810 | 18.20 | 18.25                      | 18.77          | 18.61          | 17.86          | 16.28           | 16.89          | 17.00          | 16.65          |

GSM Conducted output powers (Frame-Average)

#### Note:

Time slot average factor is as follows:

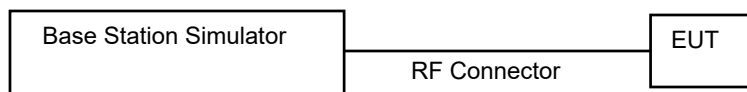
- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

GSM Class : B

GSM voice: Head SAR , Body worn SAR

GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE

Multi-slot Class 12 with CS 1 (GMSK)



## 11.2 UMTS

### HSPA+

This DUT is only capable of QPSK HSPA+ in uplink. Therefore, the RF conducted power is not measured according to 941225 D01v03r01 3G SAR.

### 11.2.1 UMTS Maximum Conducted Output Power

#### UMTS Band 5 Maximum Conducted Output Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTSBand 5 [dBm]   |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 4132<br>DL 4357 | UL 4183<br>DL 4408 | UL 4233<br>DL 4458 |          |
| 99                   | WCDMA    | 12.2 kbps RMC | 24.61              | 24.65              | 24.42              | -        |
| 99                   |          | 12.2 kbps AMR | 24.66              | 24.59              | 24.44              | -        |
| 5                    | HSDPA    | Subtest 1     | 23.49              | 23.42              | 23.25              | 0        |
| 5                    |          | Subtest 2     | 22.97              | 22.94              | 22.76              | 0        |
| 5                    |          | Subtest 3     | 22.47              | 22.44              | 22.24              | 0.5      |
| 5                    |          | Subtest 4     | 21.90              | 21.89              | 21.65              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 22.50              | 22.43              | 22.24              | 0        |
| 6                    |          | Subtest 2     | 20.36              | 20.32              | 20.16              | 2        |
| 6                    |          | Subtest 3     | 21.44              | 21.60              | 21.19              | 1        |
| 6                    |          | Subtest 4     | 20.37              | 20.33              | 20.15              | 2        |
| 6                    |          | Subtest 5     | 22.47              | 22.43              | 22.25              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 24.05              | 24.01              | 23.91              | 0        |
| 8                    |          | Subtest 2     | 23.23              | 22.97              | 22.89              | 0        |
| 8                    |          | Subtest 3     | 22.27              | 22.07              | 21.96              | 0.5      |
| 8                    |          | Subtest 4     | 22.28              | 22.02              | 21.91              | 0.5      |

UMTSAverage Conducted output powers

#### UMTS Band 4 Maximum Conducted Output Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTSBand 5 [dBm]   |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 1312<br>DL 1537 | UL 1412<br>DL 1637 | UL 1513<br>DL 1738 |          |
| 99                   | WCDMA    | 12.2 kbps RMC | 22.72              | 23.17              | 23.15              | -        |
| 99                   |          | 12.2 kbps AMR | 22.75              | 23.16              | 23.14              | -        |
| 5                    | HSDPA    | Subtest 1     | 22.67              | 23.08              | 23.20              | 0        |
| 5                    |          | Subtest 2     | 22.59              | 23.03              | 23.15              | 0        |
| 5                    |          | Subtest 3     | 22.57              | 22.54              | 23.12              | 0.5      |
| 5                    |          | Subtest 4     | 21.47              | 22.00              | 22.11              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 21.45              | 21.90              | 22.02              | 0        |
| 6                    |          | Subtest 2     | 18.61              | 18.67              | 18.74              | 2        |
| 6                    |          | Subtest 3     | 18.91              | 19.55              | 19.54              | 1        |
| 6                    |          | Subtest 4     | 18.45              | 18.91              | 18.99              | 2        |
| 6                    |          | Subtest 5     | 21.45              | 21.92              | 21.95              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 22.50              | 22.81              | 23.10              | 0        |
| 8                    |          | Subtest 2     | 22.52              | 22.88              | 23.12              | 0        |
| 8                    |          | Subtest 3     | 22.53              | 21.82              | 22.09              | 0.5      |
| 8                    |          | Subtest 4     | 22.50              | 21.87              | 22.09              | 0.5      |

UMTSAverage Conducted output powers

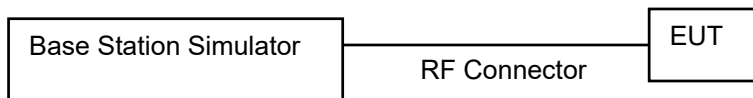
### UMTS Band 2 Maximum Conducted Output Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 9262<br>DL 9662 | UL 9400<br>DL 9800 | UL 9538<br>DL 9938 |          |
| 99                   | WCDMA    | 12.2 kbps RMC | 22.65              | 22.87              | 22.56              | -        |
| 99                   |          | 12.2 kbps AMR | 22.63              | 22.84              | 22.60              | -        |
| 5                    | HSDPA    | Subtest 1     | 22.63              | 22.86              | 22.63              | 0        |
| 5                    |          | Subtest 2     | 22.54              | 22.76              | 22.55              | 0        |
| 5                    |          | Subtest 3     | 22.42              | 22.72              | 22.52              | 0.5      |
| 5                    |          | Subtest 4     | 21.85              | 22.14              | 21.93              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 21.41              | 21.63              | 21.42              | 0        |
| 6                    |          | Subtest 2     | 19.85              | 20.13              | 19.86              | 2        |
| 6                    |          | Subtest 3     | 19.41              | 19.64              | 19.42              | 1        |
| 6                    |          | Subtest 4     | 20.92              | 21.18              | 20.95              | 2        |
| 6                    |          | Subtest 5     | 21.40              | 21.62              | 21.44              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 22.37              | 22.72              | 22.24              | 0        |
| 8                    |          | Subtest 2     | 22.35              | 22.69              | 22.26              | 0        |
| 8                    |          | Subtest 3     | 22.36              | 22.72              | 22.27              | 0.5      |
| 8                    |          | Subtest 4     | 22.39              | 22.73              | 22.23              | 0.5      |

UMTS Average Conducted output powers

#### DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK) was conformed to be used during DC-HSDPA measurements.



### 11.2.2 UMTS Reduced Conducted Output Power (Hotspot mode activated)

When Power reduction is applied , MPR set to 0

#### UMTS Band 4 Hotspot Back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 1312<br>DL 1537 | UL 1412<br>DL 1637 | UL 1513<br>DL 1738 |          |
| 99                   | WCDMA    | 12.2 kbps RMC | 19.36              | 19.64              | 19.73              | -        |
| 99                   |          | 12.2 kbps AMR | 19.35              | 19.63              | 19.72              | -        |
| 5                    | HSDPA    | Subtest 1     | 19.17              | 19.62              | 19.66              | 0        |
| 5                    |          | Subtest 2     | 19.15              | 19.55              | 19.62              | 0        |
| 5                    |          | Subtest 3     | 18.93              | 19.48              | 19.49              | 0        |
| 5                    |          | Subtest 4     | 18.90              | 19.39              | 19.48              | 0        |
| 6                    | HSUPA    | Subtest 1     | 18.23              | 18.65              | 18.71              | 0        |
| 6                    |          | Subtest 2     | 18.35              | 18.67              | 18.75              | 0        |
| 6                    |          | Subtest 3     | 18.32              | 18.64              | 18.76              | 0        |
| 6                    |          | Subtest 4     | 18.27              | 18.67              | 18.73              | 0        |
| 6                    |          | Subtest 5     | 18.25              | 18.68              | 18.76              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 18.98              | 19.31              | 19.50              | 0        |
| 8                    |          | Subtest 2     | 18.99              | 19.26              | 19.48              | 0        |
| 8                    |          | Subtest 3     | 18.96              | 19.30              | 19.51              | 0        |
| 8                    |          | Subtest 4     | 18.97              | 19.27              | 19.48              | 0        |

UMTS Average Conducted output powers

When Power reduction is applied , MPR set to 0

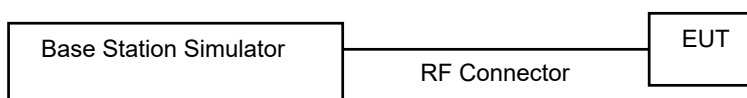
#### UMTS Band 2 Hotspot Back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 9262<br>DL 9662 | UL 9400<br>DL 9800 | UL 9538<br>DL 9938 |          |
| 99                   | WCDMA    | 12.2 kbps RMC | 18.98              | 19.26              | 18.86              | -        |
| 99                   |          | 12.2 kbps AMR | 19.03              | 19.30              | 18.90              | -        |
| 5                    | HSDPA    | Subtest 1     | 18.78              | 19.16              | 18.82              | 0        |
| 5                    |          | Subtest 2     | 18.68              | 19.12              | 18.67              | 0        |
| 5                    |          | Subtest 3     | 18.67              | 19.12              | 18.68              | 0        |
| 5                    |          | Subtest 4     | 18.66              | 19.07              | 18.66              | 0        |
| 6                    | HSUPA    | Subtest 1     | 18.13              | 18.46              | 18.04              | 0        |
| 6                    |          | Subtest 2     | 18.04              | 18.14              | 18.04              | 0        |
| 6                    |          | Subtest 3     | 17.94              | 18.13              | 17.97              | 0        |
| 6                    |          | Subtest 4     | 17.96              | 18.11              | 17.86              | 0        |
| 6                    |          | Subtest 5     | 17.96              | 18.48              | 18.01              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 18.08              | 18.84              | 18.36              | 0        |
| 8                    |          | Subtest 2     | 17.86              | 18.62              | 18.14              | 0        |
| 8                    |          | Subtest 3     | 17.65              | 18.42              | 17.95              | 0        |
| 8                    |          | Subtest 4     | 17.61              | 18.37              | 17.90              | 0        |

UMTS Average Conducted output powers

#### DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK) was conformed to be used during DC-HSDPA measurements.



### 11.2.3 UMTS Reduced Conducted Output Power (Grip Seonsor on/ Ear-jack Activated)

When Power reduction is applied , MPR set to 0

UMTS Band 4 Grip/Ear-jack Back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTSBand 4 [dBm]   |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 1312<br>DL 1537 | UL 1412<br>DL 1637 | UL 1513<br>DL 1738 |          |
| 99                   | WCDMA    | 12.2 kbps RMC | 19.37              | 19.55              | 19.78              | -        |
| 99                   |          | 12.2 kbps AMR | 19.36              | 19.54              | 19.77              | -        |
| 5                    | HSDPA    | Subtest 1     | 19.16              | 19.58              | 19.75              | 0        |
| 5                    |          | Subtest 2     | 19.14              | 19.62              | 19.55              | 0        |
| 5                    |          | Subtest 3     | 19.01              | 19.44              | 19.52              | 0        |
| 5                    |          | Subtest 4     | 18.88              | 19.41              | 19.58              | 0        |
| 6                    | HSUPA    | Subtest 1     | 18.17              | 18.73              | 18.63              | 0        |
| 6                    |          | Subtest 2     | 18.37              | 18.62              | 18.83              | 0        |
| 6                    |          | Subtest 3     | 18.40              | 18.54              | 18.78              | 0        |
| 6                    |          | Subtest 4     | 18.26              | 18.73              | 18.79              | 0        |
| 6                    |          | Subtest 5     | 18.17              | 18.65              | 18.79              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 19.05              | 19.41              | 19.56              | 0        |
| 8                    |          | Subtest 2     | 18.97              | 19.22              | 19.39              | 0        |
| 8                    |          | Subtest 3     | 18.91              | 19.30              | 19.46              | 0        |
| 8                    |          | Subtest 4     | 19.05              | 19.21              | 19.58              | 0        |

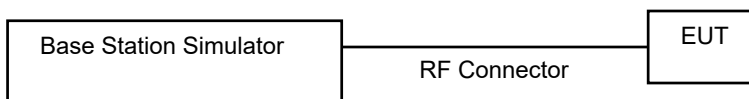
UMTS Average Conducted output powers

When Power reduction is applied , MPR set to 0

UMTS Band 2 Grip/Ear-jack Back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTSBand 2 [dBm]   |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 9262<br>DL 9662 | UL 9400<br>DL 9800 | UL 9538<br>DL 9938 |          |
| 99                   | WCDMA    | 12.2 kbps RMC | 19.00              | 19.28              | 18.89              | -        |
| 99                   |          | 12.2 kbps AMR | 19.05              | 19.34              | 18.85              | -        |
| 5                    | HSDPA    | Subtest 1     | 18.82              | 19.13              | 18.83              | 0        |
| 5                    |          | Subtest 2     | 18.71              | 19.13              | 18.62              | 0        |
| 5                    |          | Subtest 3     | 18.65              | 19.09              | 18.72              | 0        |
| 5                    |          | Subtest 4     | 18.64              | 19.06              | 18.61              | 0        |
| 6                    | HSUPA    | Subtest 1     | 18.16              | 18.49              | 18.05              | 0        |
| 6                    |          | Subtest 2     | 18.08              | 18.18              | 18.06              | 0        |
| 6                    |          | Subtest 3     | 17.96              | 18.13              | 17.98              | 0        |
| 6                    |          | Subtest 4     | 18.00              | 18.16              | 17.90              | 0        |
| 6                    |          | Subtest 5     | 17.99              | 18.50              | 17.98              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 18.13              | 18.84              | 18.31              | 0        |
| 8                    |          | Subtest 2     | 17.86              | 18.62              | 18.19              | 0        |
| 8                    |          | Subtest 3     | 17.61              | 18.39              | 17.98              | 0        |
| 8                    |          | Subtest 4     | 17.61              | 18.38              | 17.88              | 0        |

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK) was conformed to be used during DC-HSDPA measurements.



### 11.3 LTE Maximum Output Power

LTE B4/5/12/13/17/26 at 20 MHz Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

### 11.3.1 LTE Maximum Conducted Power

LTE Band 2 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18607 Ch.<br>1850.7 MHz  | 18900 Ch.<br>1880 MHz | 19193 Ch.<br>1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 22.50                    | 22.06                 | 22.54                   | 0                         | 0        |
|           |            | 1       | 3         | 22.53                    | 22.03                 | 22.55                   | 0                         | 0        |
|           |            | 1       | 5         | 22.50                    | 22.04                 | 22.51                   | 0                         | 0        |
|           |            | 3       | 0         | 22.49                    | 22.00                 | 22.48                   | 0                         | 0        |
|           |            | 3       | 1         | 22.63                    | 22.11                 | 22.60                   | 0                         | 0        |
|           |            | 3       | 3         | 22.56                    | 22.11                 | 22.56                   | 0                         | 0        |
|           |            | 6       | 0         | 21.57                    | 21.04                 | 21.54                   | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.80                    | 21.22                 | 21.65                   | 0-1                       | 1        |
|           |            | 1       | 3         | 21.65                    | 21.14                 | 21.48                   | 0-1                       | 1        |
|           |            | 1       | 5         | 21.84                    | 21.27                 | 21.77                   | 0-1                       | 1        |
|           |            | 3       | 0         | 21.67                    | 21.17                 | 21.68                   | 0-1                       | 1        |
|           |            | 3       | 1         | 21.79                    | 21.23                 | 21.82                   | 0-1                       | 1        |
|           |            | 3       | 3         | 21.64                    | 21.28                 | 21.68                   | 0-1                       | 1        |
|           |            | 6       | 0         | 20.68                    | 20.16                 | 20.61                   | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.78                    | 20.23                 | 20.76                   | 0-2                       | 2        |
|           |            | 1       | 3         | 20.67                    | 20.11                 | 20.71                   | 0-2                       | 2        |
|           |            | 1       | 5         | 20.75                    | 20.24                 | 20.76                   | 0-2                       | 2        |
|           |            | 3       | 0         | 20.61                    | 20.09                 | 20.60                   | 0-2                       | 2        |
|           |            | 3       | 1         | 20.76                    | 20.15                 | 20.74                   | 0-2                       | 2        |
|           |            | 3       | 3         | 20.64                    | 20.21                 | 20.67                   | 0-2                       | 2        |
|           |            | 6       | 0         | 19.63                    | 19.17                 | 19.66                   | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.63                    | 17.05                 | 17.65                   | 0-5                       | 5        |
|           |            | 1       | 3         | 17.57                    | 16.94                 | 17.62                   | 0-5                       | 5        |
|           |            | 1       | 5         | 17.63                    | 17.08                 | 17.71                   | 0-5                       | 5        |
|           |            | 3       | 0         | 17.51                    | 17.00                 | 17.54                   | 0-5                       | 5        |
|           |            | 3       | 1         | 17.58                    | 17.14                 | 17.67                   | 0-5                       | 5        |
|           |            | 3       | 3         | 17.61                    | 17.15                 | 17.62                   | 0-5                       | 5        |
|           |            | 6       | 0         | 17.54                    | 16.95                 | 17.52                   | 0-5                       | 5        |

## LTE Band 2 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18615 Ch. 1851.5 MHz     | 18900 Ch. 1880 MHz | 19185 Ch. 1908.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 22.55                    | 22.05              | 22.55                | 0                         | 0        |
|           |            | 1       | 7         | 22.54                    | 21.97              | 22.46                | 0                         | 0        |
|           |            | 1       | 14        | 22.53                    | 22.07              | 22.51                | 0                         | 0        |
|           |            | 8       | 0         | 21.62                    | 21.12              | 21.59                | 0-1                       | 1        |
|           |            | 8       | 3         | 21.59                    | 21.08              | 21.57                | 0-1                       | 1        |
|           |            | 8       | 7         | 21.62                    | 21.09              | 21.58                | 0-1                       | 1        |
|           |            | 15      | 0         | 21.59                    | 21.13              | 21.62                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.90                    | 21.27              | 21.80                | 0-1                       | 1        |
|           |            | 1       | 7         | 21.67                    | 21.23              | 21.89                | 0-1                       | 1        |
|           |            | 1       | 14        | 21.82                    | 21.19              | 21.70                | 0-1                       | 1        |
|           |            | 8       | 0         | 20.73                    | 20.17              | 20.67                | 0-2                       | 2        |
|           |            | 8       | 3         | 20.65                    | 20.17              | 20.72                | 0-2                       | 2        |
|           |            | 8       | 7         | 20.66                    | 20.23              | 20.72                | 0-2                       | 2        |
|           |            | 15      | 0         | 20.67                    | 20.18              | 20.73                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.79                    | 20.29              | 20.76                | 0-2                       | 2        |
|           |            | 1       | 7         | 20.67                    | 20.23              | 20.72                | 0-2                       | 2        |
|           |            | 1       | 14        | 20.82                    | 20.18              | 20.76                | 0-2                       | 2        |
|           |            | 8       | 0         | 19.56                    | 19.20              | 19.64                | 0-3                       | 3        |
|           |            | 8       | 3         | 19.57                    | 19.11              | 19.66                | 0-3                       | 3        |
|           |            | 8       | 7         | 19.64                    | 19.15              | 19.63                | 0-3                       | 3        |
|           |            | 15      | 0         | 19.61                    | 19.14              | 19.69                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.48                    | 17.12              | 17.57                | 0-5                       | 5        |
|           |            | 1       | 7         | 17.50                    | 17.07              | 17.67                | 0-5                       | 5        |
|           |            | 1       | 14        | 17.55                    | 17.16              | 17.70                | 0-5                       | 5        |
|           |            | 8       | 0         | 17.53                    | 17.03              | 17.56                | 0-5                       | 5        |
|           |            | 8       | 3         | 17.54                    | 17.03              | 17.57                | 0-5                       | 5        |
|           |            | 8       | 7         | 17.52                    | 17.04              | 17.58                | 0-5                       | 5        |
|           |            | 15      | 0         | 17.55                    | 17.06              | 17.59                | 0-5                       | 5        |

## LTE Band 2\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18625 Ch.<br>1852.5 MHz  | 18900 Ch.<br>1880 MHz | 19175 Ch.<br>1907.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 22.58                    | 22.11                 | 22.63                   | 0                         | 0        |
|           |            | 1       | 12        | 22.45                    | 22.05                 | 22.57                   | 0                         | 0        |
|           |            | 1       | 24        | 22.54                    | 22.09                 | 22.61                   | 0                         | 0        |
|           |            | 12      | 0         | 21.60                    | 21.16                 | 21.66                   | 0-1                       | 1        |
|           |            | 12      | 6         | 21.61                    | 21.15                 | 21.62                   | 0-1                       | 1        |
|           |            | 12      | 11        | 21.64                    | 21.15                 | 21.67                   | 0-1                       | 1        |
|           |            | 25      | 0         | 21.63                    | 21.14                 | 21.64                   | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.76                    | 21.40                 | 21.75                   | 0-1                       | 1        |
|           |            | 1       | 12        | 21.72                    | 21.25                 | 21.76                   | 0-1                       | 1        |
|           |            | 1       | 24        | 21.88                    | 21.40                 | 21.94                   | 0-1                       | 1        |
|           |            | 12      | 0         | 20.69                    | 20.23                 | 20.74                   | 0-2                       | 2        |
|           |            | 12      | 6         | 20.68                    | 20.16                 | 20.72                   | 0-2                       | 2        |
|           |            | 12      | 11        | 20.69                    | 20.17                 | 20.71                   | 0-2                       | 2        |
|           |            | 25      | 0         | 20.66                    | 20.18                 | 20.75                   | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.79                    | 20.27                 | 20.82                   | 0-2                       | 2        |
|           |            | 1       | 12        | 20.62                    | 20.19                 | 20.70                   | 0-2                       | 2        |
|           |            | 1       | 24        | 20.80                    | 20.32                 | 20.81                   | 0-2                       | 2        |
|           |            | 12      | 0         | 19.60                    | 19.21                 | 19.69                   | 0-3                       | 3        |
|           |            | 12      | 6         | 19.65                    | 19.22                 | 19.70                   | 0-3                       | 3        |
|           |            | 12      | 11        | 19.66                    | 19.18                 | 19.70                   | 0-3                       | 3        |
|           |            | 25      | 0         | 19.63                    | 19.19                 | 19.72                   | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.57                    | 17.10                 | 17.70                   | 0-5                       | 5        |
|           |            | 1       | 12        | 17.53                    | 16.92                 | 17.74                   | 0-5                       | 5        |
|           |            | 1       | 24        | 17.65                    | 17.17                 | 17.72                   | 0-5                       | 5        |
|           |            | 12      | 0         | 17.55                    | 17.07                 | 17.60                   | 0-5                       | 5        |
|           |            | 12      | 6         | 17.49                    | 17.08                 | 17.57                   | 0-5                       | 5        |
|           |            | 12      | 11        | 17.47                    | 17.08                 | 17.60                   | 0-5                       | 5        |
|           |            | 25      | 0         | 17.56                    | 17.11                 | 17.62                   | 0-5                       | 5        |

## LTE Band 2 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18650 Ch.<br>1855 MHz    | 18900 Ch.<br>1880 MHz | 19150 Ch.<br>1905 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 22.51                    | 22.08                 | 22.62                 | 0                         | 0        |
|           |            | 1       | 24        | 22.49                    | 22.05                 | 22.62                 | 0                         | 0        |
|           |            | 1       | 49        | 22.52                    | 22.14                 | 22.59                 | 0                         | 0        |
|           |            | 25      | 0         | 21.60                    | 21.21                 | 21.66                 | 0-1                       | 1        |
|           |            | 25      | 12        | 21.58                    | 21.20                 | 21.64                 | 0-1                       | 1        |
|           |            | 25      | 24        | 21.57                    | 21.14                 | 21.67                 | 0-1                       | 1        |
|           |            | 50      | 0         | 21.54                    | 21.06                 | 21.57                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.91                    | 21.30                 | 21.95                 | 0-1                       | 1        |
|           |            | 1       | 24        | 21.69                    | 21.28                 | 21.75                 | 0-1                       | 1        |
|           |            | 1       | 49        | 21.75                    | 21.35                 | 21.88                 | 0-1                       | 1        |
|           |            | 25      | 0         | 20.65                    | 20.22                 | 20.72                 | 0-2                       | 2        |
|           |            | 25      | 12        | 20.60                    | 20.18                 | 20.70                 | 0-2                       | 2        |
|           |            | 25      | 24        | 20.60                    | 20.23                 | 20.69                 | 0-2                       | 2        |
|           |            | 50      | 0         | 20.55                    | 20.14                 | 20.61                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.86                    | 20.38                 | 20.90                 | 0-2                       | 2        |
|           |            | 1       | 24        | 20.75                    | 20.23                 | 20.74                 | 0-2                       | 2        |
|           |            | 1       | 49        | 20.71                    | 20.22                 | 20.87                 | 0-2                       | 2        |
|           |            | 25      | 0         | 19.56                    | 19.20                 | 19.70                 | 0-3                       | 3        |
|           |            | 25      | 12        | 19.53                    | 19.18                 | 19.66                 | 0-3                       | 3        |
|           |            | 25      | 24        | 19.51                    | 19.13                 | 19.68                 | 0-3                       | 3        |
|           |            | 50      | 0         | 19.57                    | 19.14                 | 19.65                 | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.59                    | 17.18                 | 17.71                 | 0-5                       | 5        |
|           |            | 1       | 24        | 17.61                    | 17.12                 | 17.61                 | 0-5                       | 5        |
|           |            | 1       | 49        | 17.61                    | 17.15                 | 17.65                 | 0-5                       | 5        |
|           |            | 25      | 0         | 17.54                    | 17.13                 | 17.62                 | 0-5                       | 5        |
|           |            | 25      | 12        | 17.53                    | 17.07                 | 17.61                 | 0-5                       | 5        |
|           |            | 25      | 24        | 17.49                    | 17.10                 | 17.62                 | 0-5                       | 5        |
|           |            | 50      | 0         | 17.55                    | 17.15                 | 17.60                 | 0-5                       | 5        |

**LTE Band 2 \_ 15 MHz Bandwidth**

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18675 Ch. 1857.5 MHz     | 18900 Ch. 1880 MHz | 19125 Ch. 1902.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 22.55                    | 22.21              | 22.64                | 0                         | 0        |
|           |            | 1       | 36        | 22.39                    | 21.98              | 22.45                | 0                         | 0        |
|           |            | 1       | 74        | 22.57                    | 22.10              | 22.56                | 0                         | 0        |
|           |            | 36      | 0         | 21.57                    | 21.14              | 21.59                | 0-1                       | 1        |
|           |            | 36      | 18        | 21.57                    | 21.13              | 21.58                | 0-1                       | 1        |
|           |            | 36      | 39        | 21.56                    | 21.14              | 21.58                | 0-1                       | 1        |
|           |            | 75      | 0         | 21.57                    | 21.12              | 21.59                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.83                    | 21.45              | 21.83                | 0-1                       | 1        |
|           |            | 1       | 36        | 21.57                    | 21.11              | 21.66                | 0-1                       | 1        |
|           |            | 1       | 74        | 21.74                    | 21.33              | 21.75                | 0-1                       | 1        |
|           |            | 36      | 0         | 20.57                    | 20.15              | 20.60                | 0-2                       | 2        |
|           |            | 36      | 18        | 20.58                    | 20.16              | 20.61                | 0-2                       | 2        |
|           |            | 36      | 39        | 20.57                    | 20.13              | 20.56                | 0-2                       | 2        |
|           |            | 75      | 0         | 20.56                    | 20.16              | 20.60                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.79                    | 20.31              | 20.81                | 0-2                       | 2        |
|           |            | 1       | 36        | 20.61                    | 20.10              | 20.54                | 0-2                       | 2        |
|           |            | 1       | 74        | 20.70                    | 20.34              | 20.73                | 0-2                       | 2        |
|           |            | 36      | 0         | 19.61                    | 19.17              | 19.61                | 0-3                       | 3        |
|           |            | 36      | 18        | 19.59                    | 19.17              | 19.61                | 0-3                       | 3        |
|           |            | 36      | 39        | 19.60                    | 19.16              | 19.58                | 0-3                       | 3        |
|           |            | 75      | 0         | 19.56                    | 19.17              | 19.59                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.73                    | 17.12              | 17.75                | 0-5                       | 5        |
|           |            | 1       | 36        | 17.55                    | 17.11              | 17.62                | 0-5                       | 5        |
|           |            | 1       | 74        | 17.69                    | 17.22              | 17.66                | 0-5                       | 5        |
|           |            | 36      | 0         | 17.54                    | 17.11              | 17.57                | 0-5                       | 5        |
|           |            | 36      | 18        | 17.56                    | 17.13              | 17.61                | 0-5                       | 5        |
|           |            | 36      | 39        | 17.51                    | 17.08              | 17.53                | 0-5                       | 5        |
|           |            | 75      | 0         | 17.57                    | 17.11              | 17.57                | 0-5                       | 5        |

## LTE Band 2 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18700 Ch.<br>1860 MHz    | 18900 Ch.<br>1880 MHz | 19100 Ch.<br>1900 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 22.48                    | 22.18                 | 22.58                 | 0                         | 0        |
|           |            | 1       | 49        | 22.42                    | 22.03                 | 22.52                 | 0                         | 0        |
|           |            | 1       | 99        | 22.47                    | 22.12                 | 22.56                 | 0                         | 0        |
|           |            | 50      | 0         | 21.51                    | 21.09                 | 21.57                 | 0-1                       | 1        |
|           |            | 50      | 25        | 21.51                    | 21.06                 | 21.53                 | 0-1                       | 1        |
|           |            | 50      | 49        | 21.49                    | 21.08                 | 21.52                 | 0-1                       | 1        |
|           |            | 100     | 0         | 21.54                    | 21.12                 | 21.56                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.81                    | 21.57                 | 21.93                 | 0-1                       | 1        |
|           |            | 1       | 49        | 21.62                    | 21.28                 | 21.64                 | 0-1                       | 1        |
|           |            | 1       | 99        | 21.81                    | 21.33                 | 21.76                 | 0-1                       | 1        |
|           |            | 50      | 0         | 20.54                    | 20.14                 | 20.57                 | 0-2                       | 2        |
|           |            | 50      | 25        | 20.50                    | 20.11                 | 20.53                 | 0-2                       | 2        |
|           |            | 50      | 49        | 20.49                    | 20.13                 | 20.51                 | 0-2                       | 2        |
|           |            | 100     | 0         | 20.50                    | 20.10                 | 20.54                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.75                    | 20.48                 | 20.86                 | 0-2                       | 2        |
|           |            | 1       | 49        | 20.54                    | 20.31                 | 20.74                 | 0-2                       | 2        |
|           |            | 1       | 99        | 20.73                    | 20.44                 | 20.81                 | 0-2                       | 2        |
|           |            | 50      | 0         | 19.54                    | 19.16                 | 19.58                 | 0-3                       | 3        |
|           |            | 50      | 25        | 19.51                    | 19.14                 | 19.54                 | 0-3                       | 3        |
|           |            | 50      | 49        | 19.49                    | 19.10                 | 19.53                 | 0-3                       | 3        |
|           |            | 100     | 0         | 19.50                    | 19.09                 | 19.57                 | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.70                    | 17.28                 | 17.75                 | 0-5                       | 5        |
|           |            | 1       | 49        | 17.52                    | 17.17                 | 17.64                 | 0-5                       | 5        |
|           |            | 1       | 99        | 17.54                    | 17.27                 | 17.64                 | 0-5                       | 5        |
|           |            | 50      | 0         | 17.50                    | 17.11                 | 17.52                 | 0-5                       | 5        |
|           |            | 50      | 25        | 17.46                    | 17.12                 | 17.53                 | 0-5                       | 5        |
|           |            | 50      | 49        | 17.50                    | 17.11                 | 17.53                 | 0-5                       | 5        |
|           |            | 100     | 0         | 17.53                    | 17.14                 | 17.55                 | 0-5                       | 5        |

[ LTE Band 4 Conducted Power ]

LTE Band 4 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19957 Ch. 1710.7 MHz     | 20175 Ch. 1732.5 MHz | 20393 Ch. 1754.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 23.19                    | 22.81                | 22.57                | 0                         | 0        |
|           |            | 1       | 3         | 23.23                    | 22.81                | 22.59                | 0                         | 0        |
|           |            | 1       | 5         | 23.22                    | 22.84                | 22.56                | 0                         | 0        |
|           |            | 3       | 0         | 23.18                    | 22.78                | 22.54                | 0                         | 0        |
|           |            | 3       | 1         | 23.36                    | 22.94                | 22.70                | 0                         | 0        |
|           |            | 3       | 3         | 23.25                    | 22.82                | 22.57                | 0                         | 0        |
|           |            | 6       | 0         | 22.24                    | 21.90                | 21.62                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.49                    | 22.12                | 21.82                | 0-1                       | 1        |
|           |            | 1       | 3         | 22.24                    | 21.83                | 21.64                | 0-1                       | 1        |
|           |            | 1       | 5         | 22.44                    | 22.05                | 21.87                | 0-1                       | 1        |
|           |            | 3       | 0         | 22.31                    | 21.95                | 21.75                | 0-1                       | 1        |
|           |            | 3       | 1         | 22.45                    | 22.03                | 21.89                | 0-1                       | 1        |
|           |            | 3       | 3         | 22.39                    | 22.02                | 21.78                | 0-1                       | 1        |
|           |            | 6       | 0         | 21.39                    | 20.96                | 20.75                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.37                    | 21.18                | 20.82                | 0-2                       | 2        |
|           |            | 1       | 3         | 21.35                    | 21.03                | 20.83                | 0-2                       | 2        |
|           |            | 1       | 5         | 21.38                    | 21.06                | 20.79                | 0-2                       | 2        |
|           |            | 3       | 0         | 21.35                    | 20.94                | 20.71                | 0-2                       | 2        |
|           |            | 3       | 1         | 21.51                    | 21.05                | 20.90                | 0-2                       | 2        |
|           |            | 3       | 3         | 21.32                    | 21.03                | 20.72                | 0-2                       | 2        |
|           |            | 6       | 0         | 20.36                    | 19.97                | 19.66                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.39                    | 17.94                | 17.63                | 0-5                       | 5        |
|           |            | 1       | 3         | 18.30                    | 17.63                | 17.44                | 0-5                       | 5        |
|           |            | 1       | 5         | 18.41                    | 17.88                | 17.56                | 0-5                       | 5        |
|           |            | 3       | 0         | 18.17                    | 17.79                | 17.51                | 0-5                       | 5        |
|           |            | 3       | 1         | 18.42                    | 17.98                | 17.73                | 0-5                       | 5        |
|           |            | 3       | 3         | 18.30                    | 17.89                | 17.64                | 0-5                       | 5        |
|           |            | 6       | 0         | 18.30                    | 17.82                | 17.53                | 0-5                       | 5        |

## LTE Band 4 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19965 Ch. 1711.5 MHz     | 20175 Ch. 1732.5 MHz | 20385 Ch. 1753.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 23.12                    | 22.74                | 22.51                | 0                         | 0        |
|           |            | 1       | 7         | 23.11                    | 22.74                | 22.44                | 0                         | 0        |
|           |            | 1       | 14        | 23.22                    | 22.82                | 22.57                | 0                         | 0        |
|           |            | 8       | 0         | 22.32                    | 21.86                | 21.62                | 0-1                       | 1        |
|           |            | 8       | 3         | 22.29                    | 21.87                | 21.55                | 0-1                       | 1        |
|           |            | 8       | 7         | 22.29                    | 21.84                | 21.58                | 0-1                       | 1        |
|           |            | 15      | 0         | 22.31                    | 21.87                | 21.57                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.34                    | 22.09                | 21.75                | 0-1                       | 1        |
|           |            | 1       | 7         | 22.40                    | 22.03                | 21.64                | 0-1                       | 1        |
|           |            | 1       | 14        | 22.36                    | 22.02                | 21.82                | 0-1                       | 1        |
|           |            | 8       | 0         | 21.37                    | 20.97                | 20.68                | 0-2                       | 2        |
|           |            | 8       | 3         | 21.32                    | 20.94                | 20.63                | 0-2                       | 2        |
|           |            | 8       | 7         | 21.36                    | 20.95                | 20.67                | 0-2                       | 2        |
|           |            | 15      | 0         | 21.33                    | 20.93                | 20.65                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.34                    | 21.09                | 20.68                | 0-2                       | 2        |
|           |            | 1       | 7         | 21.23                    | 21.05                | 20.54                | 0-2                       | 2        |
|           |            | 1       | 14        | 21.38                    | 21.03                | 20.64                | 0-2                       | 2        |
|           |            | 8       | 0         | 20.35                    | 19.95                | 19.65                | 0-3                       | 3        |
|           |            | 8       | 3         | 20.33                    | 19.94                | 19.58                | 0-3                       | 3        |
|           |            | 8       | 7         | 20.34                    | 19.97                | 19.63                | 0-3                       | 3        |
|           |            | 15      | 0         | 20.34                    | 19.93                | 19.58                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.35                    | 17.85                | 17.61                | 0-5                       | 5        |
|           |            | 1       | 7         | 18.23                    | 17.81                | 17.46                | 0-5                       | 5        |
|           |            | 1       | 14        | 18.41                    | 17.87                | 17.56                | 0-5                       | 5        |
|           |            | 8       | 0         | 18.22                    | 17.81                | 17.52                | 0-5                       | 5        |
|           |            | 8       | 3         | 18.23                    | 17.77                | 17.45                | 0-5                       | 5        |
|           |            | 8       | 7         | 18.26                    | 17.79                | 17.52                | 0-5                       | 5        |
|           |            | 15      | 0         | 18.28                    | 17.80                | 17.54                | 0-5                       | 5        |

## LTE Band 4 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19975 Ch. 1712.5 MHz     | 20175 Ch. 1732.5 MHz | 20375 Ch. 1752.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.32                    | 22.89                | 22.54                | 0                         | 0        |
|           |            | 1       | 12        | 23.23                    | 22.81                | 22.44                | 0                         | 0        |
|           |            | 1       | 24        | 23.34                    | 22.93                | 22.55                | 0                         | 0        |
|           |            | 12      | 0         | 22.42                    | 22.02                | 21.64                | 0-1                       | 1        |
|           |            | 12      | 6         | 22.44                    | 21.97                | 21.65                | 0-1                       | 1        |
|           |            | 12      | 11        | 22.41                    | 21.97                | 21.64                | 0-1                       | 1        |
|           |            | 25      | 0         | 22.39                    | 21.96                | 21.64                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.40                    | 22.21                | 21.74                | 0-1                       | 1        |
|           |            | 1       | 12        | 22.43                    | 22.15                | 21.58                | 0-1                       | 1        |
|           |            | 1       | 24        | 22.57                    | 22.13                | 21.79                | 0-1                       | 1        |
|           |            | 12      | 0         | 21.44                    | 21.06                | 20.72                | 0-2                       | 2        |
|           |            | 12      | 6         | 21.46                    | 21.05                | 20.72                | 0-2                       | 2        |
|           |            | 12      | 11        | 21.46                    | 21.06                | 20.73                | 0-2                       | 2        |
|           |            | 25      | 0         | 21.44                    | 21.01                | 20.70                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.37                    | 21.14                | 20.78                | 0-2                       | 2        |
|           |            | 1       | 12        | 21.41                    | 21.13                | 20.66                | 0-2                       | 2        |
|           |            | 1       | 24        | 21.52                    | 21.18                | 20.87                | 0-2                       | 2        |
|           |            | 12      | 0         | 20.47                    | 19.99                | 19.63                | 0-3                       | 3        |
|           |            | 12      | 6         | 20.43                    | 20.00                | 19.61                | 0-3                       | 3        |
|           |            | 12      | 11        | 20.41                    | 20.02                | 19.63                | 0-3                       | 3        |
|           |            | 25      | 0         | 20.39                    | 20.02                | 19.62                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.42                    | 17.94                | 17.67                | 0-5                       | 5        |
|           |            | 1       | 12        | 18.35                    | 17.94                | 17.51                | 0-5                       | 5        |
|           |            | 1       | 24        | 18.44                    | 17.99                | 17.55                | 0-5                       | 5        |
|           |            | 12      | 0         | 18.36                    | 17.87                | 17.54                | 0-5                       | 5        |
|           |            | 12      | 6         | 18.27                    | 17.84                | 17.52                | 0-5                       | 5        |
|           |            | 12      | 11        | 18.34                    | 17.87                | 17.53                | 0-5                       | 5        |
|           |            | 25      | 0         | 18.34                    | 17.94                | 17.53                | 0-5                       | 5        |

## LTE Band 4 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                         |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-------------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 20000 Ch.<br>1715 MHz    | 20175 Ch.<br>1732.5 MHz | 20350 Ch.<br>1750 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.20                    | 22.88                   | 22.65                 | 0                         | 0        |
|           |            | 1       | 24        | 23.24                    | 22.90                   | 22.61                 | 0                         | 0        |
|           |            | 1       | 49        | 23.39                    | 22.95                   | 22.67                 | 0                         | 0        |
|           |            | 25      | 0         | 22.37                    | 21.96                   | 21.70                 | 0-1                       | 1        |
|           |            | 25      | 12        | 22.38                    | 22.01                   | 21.75                 | 0-1                       | 1        |
|           |            | 25      | 24        | 22.41                    | 22.00                   | 21.77                 | 0-1                       | 1        |
|           |            | 50      | 0         | 22.38                    | 21.96                   | 21.69                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.47                    | 22.22                   | 21.81                 | 0-1                       | 1        |
|           |            | 1       | 24        | 22.43                    | 22.03                   | 21.80                 | 0-1                       | 1        |
|           |            | 1       | 49        | 22.42                    | 22.05                   | 21.93                 | 0-1                       | 1        |
|           |            | 25      | 0         | 21.40                    | 21.09                   | 20.77                 | 0-2                       | 2        |
|           |            | 25      | 12        | 21.36                    | 21.05                   | 20.77                 | 0-2                       | 2        |
|           |            | 25      | 24        | 21.41                    | 20.99                   | 20.80                 | 0-2                       | 2        |
|           |            | 50      | 0         | 21.37                    | 20.99                   | 20.71                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.53                    | 21.21                   | 20.95                 | 0-2                       | 2        |
|           |            | 1       | 24        | 21.48                    | 21.13                   | 20.82                 | 0-2                       | 2        |
|           |            | 1       | 49        | 21.46                    | 21.18                   | 20.84                 | 0-2                       | 2        |
|           |            | 25      | 0         | 20.35                    | 20.04                   | 19.68                 | 0-3                       | 3        |
|           |            | 25      | 12        | 20.35                    | 19.97                   | 19.68                 | 0-3                       | 3        |
|           |            | 25      | 24        | 20.34                    | 19.96                   | 19.71                 | 0-3                       | 3        |
|           |            | 50      | 0         | 20.37                    | 19.99                   | 19.72                 | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.36                    | 17.95                   | 17.76                 | 0-5                       | 5        |
|           |            | 1       | 24        | 18.32                    | 17.93                   | 17.64                 | 0-5                       | 5        |
|           |            | 1       | 49        | 18.39                    | 18.05                   | 17.73                 | 0-5                       | 5        |
|           |            | 25      | 0         | 18.32                    | 17.91                   | 17.61                 | 0-5                       | 5        |
|           |            | 25      | 12        | 18.29                    | 17.90                   | 17.59                 | 0-5                       | 5        |
|           |            | 25      | 24        | 18.31                    | 17.92                   | 17.60                 | 0-5                       | 5        |
|           |            | 50      | 0         | 18.35                    | 17.93                   | 17.67                 | 0-5                       | 5        |

## LTE Band 4 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20025 Ch. 1717.5 MHz     | 20175 Ch. 1732.5 MHz | 20325 Ch. 1747.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 23.31                    | 22.92                | 22.61                | 0                         | 0        |
|           |            | 1       | 36        | 23.27                    | 22.84                | 22.50                | 0                         | 0        |
|           |            | 1       | 74        | 23.30                    | 22.93                | 22.68                | 0                         | 0        |
|           |            | 36      | 0         | 22.34                    | 21.94                | 21.67                | 0-1                       | 1        |
|           |            | 36      | 18        | 22.33                    | 21.94                | 21.71                | 0-1                       | 1        |
|           |            | 36      | 39        | 22.39                    | 21.95                | 21.66                | 0-1                       | 1        |
|           |            | 75      | 0         | 22.33                    | 21.93                | 21.65                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.30                    | 22.13                | 21.89                | 0-1                       | 1        |
|           |            | 1       | 36        | 22.32                    | 22.03                | 21.63                | 0-1                       | 1        |
|           |            | 1       | 74        | 22.55                    | 22.21                | 21.99                | 0-1                       | 1        |
|           |            | 36      | 0         | 21.30                    | 20.98                | 20.66                | 0-2                       | 2        |
|           |            | 36      | 18        | 21.28                    | 20.96                | 20.69                | 0-2                       | 2        |
|           |            | 36      | 39        | 21.32                    | 20.99                | 20.71                | 0-2                       | 2        |
|           |            | 75      | 0         | 21.34                    | 20.97                | 20.70                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.43                    | 21.07                | 20.83                | 0-2                       | 2        |
|           |            | 1       | 36        | 21.31                    | 20.86                | 20.68                | 0-2                       | 2        |
|           |            | 1       | 74        | 21.57                    | 21.16                | 20.91                | 0-2                       | 2        |
|           |            | 36      | 0         | 20.29                    | 19.97                | 19.69                | 0-3                       | 3        |
|           |            | 36      | 18        | 20.31                    | 19.98                | 19.67                | 0-3                       | 3        |
|           |            | 36      | 39        | 20.33                    | 20.00                | 19.72                | 0-3                       | 3        |
|           |            | 75      | 0         | 20.33                    | 19.93                | 19.67                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.31                    | 17.99                | 17.72                | 0-5                       | 5        |
|           |            | 1       | 36        | 18.24                    | 17.80                | 17.60                | 0-5                       | 5        |
|           |            | 1       | 74        | 18.33                    | 18.00                | 17.79                | 0-5                       | 5        |
|           |            | 36      | 0         | 18.26                    | 17.90                | 17.61                | 0-5                       | 5        |
|           |            | 36      | 18        | 18.27                    | 17.94                | 17.67                | 0-5                       | 5        |
|           |            | 36      | 39        | 18.26                    | 17.94                | 17.66                | 0-5                       | 5        |
|           |            | 75      | 0         | 18.27                    | 17.93                | 17.64                | 0-5                       | 5        |

## LTE Band 4 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 20175 Ch.<br>1732.5 MHz  |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 22.97                    | 0                         | 0        |
|           |            | 1       | 49        | 22.96                    | 0                         | 0        |
|           |            | 1       | 99        | 22.92                    | 0                         | 0        |
|           |            | 50      | 0         | 21.93                    | 0-1                       | 1        |
|           |            | 50      | 25        | 21.91                    | 0-1                       | 1        |
|           |            | 50      | 49        | 21.96                    | 0-1                       | 1        |
|           |            | 100     | 0         | 21.93                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.13                    | 0-1                       | 1        |
|           |            | 1       | 49        | 21.83                    | 0-1                       | 1        |
|           |            | 1       | 99        | 22.14                    | 0-1                       | 1        |
|           |            | 50      | 0         | 20.92                    | 0-2                       | 2        |
|           |            | 50      | 25        | 20.97                    | 0-2                       | 2        |
|           |            | 50      | 49        | 20.96                    | 0-2                       | 2        |
|           |            | 100     | 0         | 20.93                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.18                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.05                    | 0-2                       | 2        |
|           |            | 1       | 99        | 21.13                    | 0-2                       | 2        |
|           |            | 50      | 0         | 19.91                    | 0-3                       | 3        |
|           |            | 50      | 25        | 19.99                    | 0-3                       | 3        |
|           |            | 50      | 49        | 19.97                    | 0-3                       | 3        |
|           |            | 100     | 0         | 19.92                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.01                    | 0-5                       | 5        |
|           |            | 1       | 49        | 18.01                    | 0-5                       | 5        |
|           |            | 1       | 99        | 18.07                    | 0-5                       | 5        |
|           |            | 50      | 0         | 17.95                    | 0-5                       | 5        |
|           |            | 50      | 25        | 17.93                    | 0-5                       | 5        |
|           |            | 50      | 49        | 17.97                    | 0-5                       | 5        |
|           |            | 100     | 0         | 17.95                    | 0-5                       | 5        |

[ LTE Band 5 Conducted Power ]

LTE Band 5 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 20407 Ch.<br>824.7 MHz   | 20525 Ch.<br>836.5 MHz | 20643 Ch.<br>848.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 24.47                    | 24.48                  | 24.42                  | 0                         | 0        |
|           |            | 1       | 3         | 24.44                    | 24.44                  | 24.34                  | 0                         | 0        |
|           |            | 1       | 5         | 24.41                    | 24.44                  | 24.41                  | 0                         | 0        |
|           |            | 3       | 0         | 24.41                    | 24.42                  | 24.36                  | 0                         | 1        |
|           |            | 3       | 1         | 24.49                    | 24.58                  | 24.49                  | 0                         | 1        |
|           |            | 3       | 3         | 24.46                    | 24.48                  | 24.42                  | 0                         | 1        |
|           |            | 6       | 0         | 22.43                    | 22.53                  | 22.45                  | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.58                    | 22.60                  | 22.58                  | 0-1                       | 1        |
|           |            | 1       | 3         | 22.50                    | 22.57                  | 22.39                  | 0-1                       | 1        |
|           |            | 1       | 5         | 22.61                    | 22.74                  | 22.67                  | 0-1                       | 1        |
|           |            | 3       | 0         | 22.41                    | 22.63                  | 22.53                  | 0-1                       | 2        |
|           |            | 3       | 1         | 22.59                    | 22.65                  | 22.69                  | 0-1                       | 2        |
|           |            | 3       | 3         | 22.47                    | 22.63                  | 22.55                  | 0-1                       | 2        |
|           |            | 6       | 0         | 21.56                    | 21.59                  | 21.44                  | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.58                    | 21.76                  | 21.59                  | 0-2                       | 2        |
|           |            | 1       | 3         | 21.62                    | 21.61                  | 21.52                  | 0-2                       | 2        |
|           |            | 1       | 5         | 21.58                    | 21.69                  | 21.65                  | 0-2                       | 2        |
|           |            | 3       | 0         | 21.49                    | 21.57                  | 21.49                  | 0-2                       | 3        |
|           |            | 3       | 1         | 21.61                    | 21.57                  | 21.63                  | 0-2                       | 3        |
|           |            | 3       | 3         | 21.50                    | 21.59                  | 21.54                  | 0-2                       | 3        |
|           |            | 6       | 0         | 20.50                    | 20.59                  | 20.52                  | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.63                    | 20.74                  | 20.61                  | 0-5                       | 4        |
|           |            | 1       | 3         | 20.44                    | 20.69                  | 20.47                  | 0-5                       | 4        |
|           |            | 1       | 5         | 20.58                    | 20.69                  | 20.60                  | 0-5                       | 4        |
|           |            | 3       | 0         | 20.48                    | 20.56                  | 20.46                  | 0-5                       | 4        |
|           |            | 3       | 1         | 20.57                    | 20.74                  | 20.59                  | 0-5                       | 4        |
|           |            | 3       | 3         | 20.53                    | 20.66                  | 20.56                  | 0-5                       | 4        |
|           |            | 6       | 0         | 19.47                    | 19.55                  | 19.53                  | 0-5                       | 4        |

## LTE Band 5 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 20415 Ch. 825.5 MHz      | 20525 Ch. 836.5 MHz | 20635 Ch. 847.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 24.48                    | 24.48               | 24.37               | 0                         | 0        |
|           |            | 1       | 7         | 24.37                    | 24.37               | 24.33               | 0                         | 0        |
|           |            | 1       | 14        | 24.49                    | 24.49               | 24.45               | 0                         | 0        |
|           |            | 8       | 0         | 22.58                    | 22.60               | 22.50               | 0-1                       | 1        |
|           |            | 8       | 3         | 22.54                    | 22.52               | 22.43               | 0-1                       | 1        |
|           |            | 8       | 7         | 22.53                    | 22.55               | 22.49               | 0-1                       | 1        |
|           |            | 15      | 0         | 22.60                    | 22.65               | 22.54               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.70                    | 22.79               | 22.66               | 0-1                       | 1        |
|           |            | 1       | 7         | 22.74                    | 22.68               | 22.55               | 0-1                       | 1        |
|           |            | 1       | 14        | 22.72                    | 22.65               | 22.71               | 0-1                       | 1        |
|           |            | 8       | 0         | 21.56                    | 21.62               | 21.58               | 0-2                       | 2        |
|           |            | 8       | 3         | 21.56                    | 21.59               | 21.48               | 0-2                       | 2        |
|           |            | 8       | 7         | 21.63                    | 21.64               | 21.57               | 0-2                       | 2        |
|           |            | 15      | 0         | 21.60                    | 21.61               | 21.57               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.61                    | 21.66               | 21.63               | 0-2                       | 2        |
|           |            | 1       | 7         | 21.66                    | 21.54               | 21.57               | 0-2                       | 2        |
|           |            | 1       | 14        | 21.60                    | 21.58               | 21.54               | 0-2                       | 2        |
|           |            | 8       | 0         | 20.49                    | 20.57               | 20.53               | 0-3                       | 3        |
|           |            | 8       | 3         | 20.49                    | 20.54               | 20.52               | 0-3                       | 3        |
|           |            | 8       | 7         | 20.55                    | 20.61               | 20.55               | 0-3                       | 3        |
|           |            | 15      | 0         | 20.57                    | 20.60               | 20.55               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.54                    | 20.61               | 20.56               | 0-5                       | 4        |
|           |            | 1       | 7         | 20.47                    | 20.48               | 20.37               | 0-5                       | 4        |
|           |            | 1       | 14        | 20.62                    | 20.62               | 20.50               | 0-5                       | 4        |
|           |            | 8       | 0         | 19.44                    | 19.55               | 19.51               | 0-5                       | 4        |
|           |            | 8       | 3         | 19.45                    | 19.54               | 19.48               | 0-5                       | 4        |
|           |            | 8       | 7         | 19.52                    | 19.52               | 19.51               | 0-5                       | 4        |
|           |            | 15      | 0         | 19.49                    | 19.56               | 19.49               | 0-5                       | 4        |

## LTE Band 5 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 20425 Ch. 826.5 MHz      | 20525 Ch. 836.5 MHz | 20625 Ch. 846.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.53                    | 24.60               | 24.47               | 0                         | 0        |
|           |            | 1       | 12        | 24.41                    | 24.39               | 24.40               | 0                         | 0        |
|           |            | 1       | 24        | 24.54                    | 24.49               | 24.49               | 0                         | 0        |
|           |            | 12      | 0         | 22.62                    | 22.58               | 22.53               | 0-1                       | 1        |
|           |            | 12      | 6         | 22.61                    | 22.64               | 22.55               | 0-1                       | 1        |
|           |            | 12      | 11        | 22.59                    | 22.62               | 22.62               | 0-1                       | 1        |
|           |            | 25      | 0         | 22.60                    | 22.59               | 22.55               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.78                    | 22.77               | 22.59               | 0-1                       | 1        |
|           |            | 1       | 12        | 22.72                    | 22.79               | 22.59               | 0-1                       | 1        |
|           |            | 1       | 24        | 22.81                    | 22.77               | 22.76               | 0-1                       | 1        |
|           |            | 12      | 0         | 21.64                    | 21.64               | 21.61               | 0-2                       | 2        |
|           |            | 12      | 6         | 21.63                    | 21.61               | 21.58               | 0-2                       | 2        |
|           |            | 12      | 11        | 21.65                    | 21.61               | 21.58               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.62                    | 21.60               | 21.57               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.68                    | 21.72               | 21.67               | 0-2                       | 2        |
|           |            | 1       | 12        | 21.67                    | 21.61               | 21.66               | 0-2                       | 2        |
|           |            | 1       | 24        | 21.73                    | 21.62               | 21.70               | 0-2                       | 2        |
|           |            | 12      | 0         | 20.58                    | 20.62               | 20.55               | 0-3                       | 3        |
|           |            | 12      | 6         | 20.61                    | 20.53               | 20.56               | 0-3                       | 3        |
|           |            | 12      | 11        | 20.63                    | 20.57               | 20.61               | 0-3                       | 3        |
|           |            | 25      | 0         | 20.59                    | 20.64               | 20.55               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.69                    | 20.90               | 20.71               | 0-5                       | 4        |
|           |            | 1       | 12        | 20.67                    | 20.61               | 20.67               | 0-5                       | 4        |
|           |            | 1       | 24        | 20.77                    | 20.66               | 20.77               | 0-5                       | 4        |
|           |            | 12      | 0         | 19.60                    | 19.58               | 19.50               | 0-5                       | 4        |
|           |            | 12      | 6         | 19.53                    | 19.55               | 19.52               | 0-5                       | 4        |
|           |            | 12      | 11        | 19.54                    | 19.55               | 19.54               | 0-5                       | 4        |
|           |            | 25      | 0         | 19.64                    | 19.65               | 19.53               | 0-5                       | 4        |

## LTE Band 5 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 20525 Ch.<br>836.5 MHz   |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 24.78                    | 0                         | 0        |
|           |            | 1       | 24        | 24.55                    | 0                         | 0        |
|           |            | 1       | 49        | 24.52                    | 0                         | 0        |
|           |            | 25      | 0         | 22.71                    | 0-1                       | 1        |
|           |            | 25      | 12        | 22.64                    | 0-1                       | 1        |
|           |            | 25      | 24        | 22.58                    | 0-1                       | 1        |
|           |            | 50      | 0         | 22.60                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.90                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.80                    | 0-1                       | 1        |
|           |            | 1       | 49        | 22.75                    | 0-1                       | 1        |
|           |            | 25      | 0         | 21.67                    | 0-2                       | 2        |
|           |            | 25      | 12        | 21.63                    | 0-2                       | 2        |
|           |            | 25      | 24        | 21.58                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.61                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.87                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.68                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.68                    | 0-2                       | 2        |
|           |            | 25      | 0         | 20.67                    | 0-3                       | 3        |
|           |            | 25      | 12        | 20.60                    | 0-3                       | 3        |
|           |            | 25      | 24        | 20.56                    | 0-3                       | 3        |
|           |            | 50      | 0         | 20.60                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.78                    | 0-5                       | 4        |
|           |            | 1       | 24        | 20.65                    | 0-5                       | 4        |
|           |            | 1       | 49        | 20.68                    | 0-5                       | 4        |
|           |            | 25      | 0         | 19.69                    | 0-5                       | 4        |
|           |            | 25      | 12        | 19.60                    | 0-5                       | 4        |
|           |            | 25      | 24        | 19.59                    | 0-5                       | 4        |
|           |            | 50      | 0         | 19.61                    | 0-5                       | 4        |

[LTE Band 12 Conducted Power]

LTE Band 12 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23017 Ch. 699.7 MHz      | 23095 Ch. 707.5 MHz | 23173 Ch. 715.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 24.14                    | 24.17               | 24.04               | 0                         | 0        |
|           |            | 1       | 3         | 24.18                    | 24.14               | 24.00               | 0                         | 0        |
|           |            | 1       | 5         | 24.17                    | 24.15               | 24.08               | 0                         | 0        |
|           |            | 3       | 0         | 24.22                    | 24.16               | 24.04               | 0                         | 1        |
|           |            | 3       | 1         | 24.33                    | 24.30               | 24.19               | 0                         | 1        |
|           |            | 3       | 3         | 24.20                    | 24.17               | 24.09               | 0                         | 1        |
|           |            | 6       | 0         | 22.69                    | 22.66               | 22.58               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.39                    | 22.46               | 22.10               | 0-1                       | 1        |
|           |            | 1       | 3         | 22.26                    | 22.31               | 22.09               | 0-1                       | 1        |
|           |            | 1       | 5         | 22.47                    | 22.33               | 22.16               | 0-1                       | 1        |
|           |            | 3       | 0         | 22.25                    | 22.25               | 22.09               | 0-1                       | 2        |
|           |            | 3       | 1         | 22.42                    | 22.39               | 22.20               | 0-1                       | 2        |
|           |            | 3       | 3         | 22.27                    | 22.29               | 22.13               | 0-1                       | 2        |
|           |            | 6       | 0         | 21.27                    | 21.37               | 21.06               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.36                    | 21.47               | 21.17               | 0-2                       | 2        |
|           |            | 1       | 3         | 21.37                    | 21.34               | 21.11               | 0-2                       | 2        |
|           |            | 1       | 5         | 21.34                    | 21.34               | 21.16               | 0-2                       | 2        |
|           |            | 3       | 0         | 21.21                    | 21.25               | 21.07               | 0-2                       | 3        |
|           |            | 3       | 1         | 21.36                    | 21.33               | 21.12               | 0-2                       | 3        |
|           |            | 3       | 3         | 21.29                    | 21.25               | 21.14               | 0-2                       | 3        |
|           |            | 6       | 0         | 20.21                    | 20.24               | 20.09               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.31                    | 20.44               | 20.25               | 0-5                       | 4        |
|           |            | 1       | 3         | 20.18                    | 20.20               | 20.17               | 0-5                       | 4        |
|           |            | 1       | 5         | 20.36                    | 20.40               | 20.26               | 0-5                       | 4        |
|           |            | 3       | 0         | 20.24                    | 20.25               | 20.10               | 0-5                       | 4        |
|           |            | 3       | 1         | 20.39                    | 20.28               | 20.14               | 0-5                       | 4        |
|           |            | 3       | 3         | 20.32                    | 20.38               | 20.17               | 0-5                       | 4        |
|           |            | 6       | 0         | 19.18                    | 19.26               | 19.10               | 0-5                       | 4        |

## LTE Band 12 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23025 Ch. 700.5 MHz      | 23095 Ch. 707.5 MHz | 23165 Ch. 714.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 24.11                    | 24.19               | 24.04               | 0                         | 0        |
|           |            | 1       | 7         | 24.04                    | 24.05               | 23.89               | 0                         | 0        |
|           |            | 1       | 14        | 24.17                    | 24.16               | 24.04               | 0                         | 0        |
|           |            | 8       | 0         | 22.75                    | 22.79               | 22.62               | 0-1                       | 1        |
|           |            | 8       | 3         | 22.71                    | 22.70               | 22.55               | 0-1                       | 1        |
|           |            | 8       | 7         | 22.71                    | 22.67               | 22.59               | 0-1                       | 1        |
|           |            | 15      | 0         | 22.78                    | 22.79               | 22.64               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.37                    | 22.35               | 22.26               | 0-1                       | 1        |
|           |            | 1       | 7         | 22.34                    | 22.40               | 22.14               | 0-1                       | 1        |
|           |            | 1       | 14        | 22.28                    | 22.32               | 22.13               | 0-1                       | 1        |
|           |            | 8       | 0         | 21.29                    | 21.31               | 21.10               | 0-2                       | 2        |
|           |            | 8       | 3         | 21.20                    | 21.23               | 21.09               | 0-2                       | 2        |
|           |            | 8       | 7         | 21.29                    | 21.24               | 21.12               | 0-2                       | 2        |
|           |            | 15      | 0         | 21.29                    | 21.29               | 21.12               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.30                    | 21.38               | 21.21               | 0-2                       | 2        |
|           |            | 1       | 7         | 21.23                    | 21.27               | 21.12               | 0-2                       | 2        |
|           |            | 1       | 14        | 21.41                    | 21.34               | 21.19               | 0-2                       | 2        |
|           |            | 8       | 0         | 20.26                    | 20.25               | 20.13               | 0-3                       | 3        |
|           |            | 8       | 3         | 20.21                    | 20.17               | 20.09               | 0-3                       | 3        |
|           |            | 8       | 7         | 20.32                    | 20.21               | 20.09               | 0-3                       | 3        |
|           |            | 15      | 0         | 20.29                    | 20.24               | 20.13               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.20                    | 20.31               | 20.12               | 0-5                       | 4        |
|           |            | 1       | 7         | 20.13                    | 20.28               | 20.15               | 0-5                       | 4        |
|           |            | 1       | 14        | 20.31                    | 20.32               | 20.17               | 0-5                       | 4        |
|           |            | 8       | 0         | 19.18                    | 19.23               | 19.09               | 0-5                       | 4        |
|           |            | 8       | 3         | 19.17                    | 19.19               | 19.06               | 0-5                       | 4        |
|           |            | 8       | 7         | 19.25                    | 19.17               | 19.05               | 0-5                       | 4        |
|           |            | 15      | 0         | 19.21                    | 19.21               | 19.09               | 0-5                       | 4        |

## LTE Band 12 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23035 Ch. 701.5 MHz      | 23095 Ch. 707.5 MHz | 23155 Ch. 713.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.31                    | 24.27               | 24.09               | 0                         | 0        |
|           |            | 1       | 12        | 24.23                    | 24.03               | 23.91               | 0                         | 0        |
|           |            | 1       | 24        | 24.22                    | 24.07               | 23.99               | 0                         | 0        |
|           |            | 12      | 0         | 22.79                    | 22.74               | 22.65               | 0-1                       | 1        |
|           |            | 12      | 6         | 22.80                    | 22.72               | 22.63               | 0-1                       | 1        |
|           |            | 12      | 11        | 22.79                    | 22.74               | 22.66               | 0-1                       | 1        |
|           |            | 25      | 0         | 22.75                    | 22.72               | 22.62               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.51                    | 22.39               | 22.26               | 0-1                       | 1        |
|           |            | 1       | 12        | 22.43                    | 22.32               | 22.23               | 0-1                       | 1        |
|           |            | 1       | 24        | 22.54                    | 22.32               | 22.32               | 0-1                       | 1        |
|           |            | 12      | 0         | 21.30                    | 21.33               | 21.14               | 0-2                       | 2        |
|           |            | 12      | 6         | 21.31                    | 21.25               | 21.11               | 0-2                       | 2        |
|           |            | 12      | 11        | 21.25                    | 21.24               | 21.09               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.26                    | 21.26               | 21.10               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.27                    | 21.46               | 21.20               | 0-2                       | 2        |
|           |            | 1       | 12        | 21.26                    | 21.20               | 21.05               | 0-2                       | 2        |
|           |            | 1       | 24        | 21.37                    | 21.28               | 21.22               | 0-2                       | 2        |
|           |            | 12      | 0         | 20.30                    | 20.33               | 20.15               | 0-3                       | 3        |
|           |            | 12      | 6         | 20.29                    | 20.26               | 20.14               | 0-3                       | 3        |
|           |            | 12      | 11        | 20.28                    | 20.24               | 20.15               | 0-3                       | 3        |
|           |            | 25      | 0         | 20.26                    | 20.26               | 20.11               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.33                    | 20.44               | 20.20               | 0-5                       | 4        |
|           |            | 1       | 12        | 20.31                    | 20.36               | 20.14               | 0-5                       | 4        |
|           |            | 1       | 24        | 20.31                    | 20.30               | 20.22               | 0-5                       | 4        |
|           |            | 12      | 0         | 19.25                    | 19.26               | 19.10               | 0-5                       | 4        |
|           |            | 12      | 6         | 19.25                    | 19.27               | 19.05               | 0-5                       | 4        |
|           |            | 12      | 11        | 19.28                    | 19.23               | 19.09               | 0-5                       | 4        |
|           |            | 25      | 0         | 19.26                    | 19.29               | 19.13               | 0-5                       | 4        |

## LTE Band 12 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 23095 Ch.<br>707.5 MHz   |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 24.29                    | 0                         | 0        |
|           |            | 1       | 24        | 24.18                    | 0                         | 0        |
|           |            | 1       | 49        | 24.13                    | 0                         | 0        |
|           |            | 25      | 0         | 22.86                    | 0-1                       | 1        |
|           |            | 25      | 12        | 22.75                    | 0-1                       | 1        |
|           |            | 25      | 24        | 22.69                    | 0-1                       | 1        |
|           |            | 50      | 0         | 22.78                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.56                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.26                    | 0-1                       | 1        |
|           |            | 1       | 49        | 22.37                    | 0-1                       | 1        |
|           |            | 25      | 0         | 21.32                    | 0-2                       | 2        |
|           |            | 25      | 12        | 21.26                    | 0-2                       | 2        |
|           |            | 25      | 24        | 21.20                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.28                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.57                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.41                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.33                    | 0-2                       | 2        |
|           |            | 25      | 0         | 20.34                    | 0-3                       | 3        |
|           |            | 25      | 12        | 20.25                    | 0-3                       | 3        |
|           |            | 25      | 24        | 20.19                    | 0-3                       | 3        |
|           |            | 50      | 0         | 20.30                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.40                    | 0-5                       | 4        |
|           |            | 1       | 24        | 20.39                    | 0-5                       | 4        |
|           |            | 1       | 49        | 20.42                    | 0-5                       | 4        |
|           |            | 25      | 0         | 19.34                    | 0-5                       | 4        |
|           |            | 25      | 12        | 19.29                    | 0-5                       | 4        |
|           |            | 25      | 24        | 19.22                    | 0-5                       | 4        |
|           |            | 50      | 0         | 19.24                    | 0-5                       | 4        |

[LTE Band 13 Conducted Power ]  
LTE Band 13 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                   |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23205 Ch. 779.5 MHz      | 23230 Ch. 782 MHz | 23255 Ch. 784.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.96                    | 24.08             | 23.98               | 0                         | 0        |
|           |            | 1       | 12        | 23.88                    | 24.00             | 23.84               | 0                         | 0        |
|           |            | 1       | 24        | 24.05                    | 24.12             | 23.91               | 0                         | 0        |
|           |            | 12      | 0         | 22.64                    | 22.65             | 22.55               | 0-1                       | 1        |
|           |            | 12      | 6         | 22.59                    | 22.68             | 22.58               | 0-1                       | 1        |
|           |            | 12      | 11        | 22.65                    | 22.71             | 22.56               | 0-1                       | 1        |
|           |            | 25      | 0         | 22.57                    | 22.66             | 22.53               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.28                    | 22.30             | 22.15               | 0-1                       | 1        |
|           |            | 1       | 12        | 22.14                    | 22.30             | 22.01               | 0-1                       | 1        |
|           |            | 1       | 24        | 22.41                    | 22.51             | 22.32               | 0-1                       | 1        |
|           |            | 12      | 0         | 21.13                    | 21.20             | 21.09               | 0-2                       | 2        |
|           |            | 12      | 6         | 21.13                    | 21.17             | 21.09               | 0-2                       | 2        |
|           |            | 12      | 11        | 21.17                    | 21.23             | 21.07               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.11                    | 21.18             | 21.01               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.25                    | 21.18             | 21.07               | 0-2                       | 2        |
|           |            | 1       | 12        | 21.18                    | 21.09             | 21.11               | 0-2                       | 2        |
|           |            | 1       | 24        | 21.27                    | 21.34             | 21.14               | 0-2                       | 2        |
|           |            | 12      | 0         | 20.10                    | 20.12             | 20.04               | 0-3                       | 3        |
|           |            | 12      | 6         | 20.13                    | 20.21             | 20.07               | 0-3                       | 3        |
|           |            | 12      | 11        | 20.12                    | 20.20             | 20.07               | 0-3                       | 3        |
|           |            | 25      | 0         | 20.13                    | 20.19             | 19.98               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.19                    | 20.24             | 20.12               | 0-5                       | 4        |
|           |            | 1       | 12        | 20.14                    | 20.18             | 20.13               | 0-5                       | 4        |
|           |            | 1       | 24        | 20.29                    | 20.34             | 20.02               | 0-5                       | 4        |
|           |            | 12      | 0         | 19.07                    | 19.06             | 18.96               | 0-5                       | 4        |
|           |            | 12      | 6         | 19.10                    | 19.09             | 19.00               | 0-5                       | 4        |
|           |            | 12      | 11        | 19.10                    | 19.12             | 19.04               | 0-5                       | 4        |
|           |            | 25      | 0         | 19.11                    | 19.17             | 19.01               | 0-5                       | 4        |

## LTE Band 13 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 23230 Ch. 782 MHz        |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.97                    | 0                         | 0        |
|           |            | 1       | 24        | 24.05                    | 0                         | 0        |
|           |            | 1       | 49        | 24.11                    | 0                         | 0        |
|           |            | 25      | 0         | 22.62                    | 0-1                       | 1        |
|           |            | 25      | 12        | 22.65                    | 0-1                       | 1        |
|           |            | 25      | 24        | 22.70                    | 0-1                       | 1        |
|           |            | 50      | 0         | 22.68                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.23                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.24                    | 0-1                       | 1        |
|           |            | 1       | 49        | 22.37                    | 0-1                       | 1        |
|           |            | 25      | 0         | 21.09                    | 0-2                       | 2        |
|           |            | 25      | 12        | 21.18                    | 0-2                       | 2        |
|           |            | 25      | 24        | 21.23                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.17                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.32                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.32                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.31                    | 0-2                       | 2        |
|           |            | 25      | 0         | 20.10                    | 0-3                       | 3        |
|           |            | 25      | 12        | 20.14                    | 0-3                       | 3        |
|           |            | 25      | 24        | 20.14                    | 0-3                       | 3        |
|           |            | 50      | 0         | 20.12                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.19                    | 0-5                       | 4        |
|           |            | 1       | 24        | 20.32                    | 0-5                       | 4        |
|           |            | 1       | 49        | 20.23                    | 0-5                       | 4        |
|           |            | 25      | 0         | 19.12                    | 0-5                       | 4        |
|           |            | 25      | 12        | 19.18                    | 0-5                       | 4        |
|           |            | 25      | 24        | 19.21                    | 0-5                       | 4        |
|           |            | 50      | 0         | 19.14                    | 0-5                       | 4        |

[ LTE Band 17 Conducted Power ]  
LTE Band 17 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 23790 Ch. 710 MHz        |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.11                    | 0                         | 0        |
|           |            | 1       | 12        | 24.01                    | 0                         | 0        |
|           |            | 1       | 24        | 24.06                    | 0                         | 0        |
|           |            | 12      | 0         | 22.75                    | 0-1                       | 1        |
|           |            | 12      | 6         | 22.66                    | 0-1                       | 1        |
|           |            | 12      | 11        | 22.74                    | 0-1                       | 1        |
|           |            | 25      | 0         | 22.70                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.39                    | 0-1                       | 1        |
|           |            | 1       | 12        | 22.26                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.33                    | 0-1                       | 1        |
|           |            | 12      | 0         | 21.28                    | 0-2                       | 2        |
|           |            | 12      | 6         | 21.29                    | 0-2                       | 2        |
|           |            | 12      | 11        | 21.25                    | 0-2                       | 2        |
|           |            | 25      | 0         | 21.21                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.28                    | 0-2                       | 2        |
|           |            | 1       | 12        | 21.20                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.31                    | 0-2                       | 2        |
|           |            | 12      | 0         | 20.27                    | 0-3                       | 3        |
|           |            | 12      | 6         | 20.20                    | 0-3                       | 3        |
|           |            | 12      | 11        | 20.21                    | 0-3                       | 3        |
|           |            | 25      | 0         | 20.16                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.26                    | 0-5                       | 4        |
|           |            | 1       | 12        | 20.26                    | 0-5                       | 4        |
|           |            | 1       | 24        | 20.29                    | 0-5                       | 4        |
|           |            | 12      | 0         | 19.21                    | 0-5                       | 4        |
|           |            | 12      | 6         | 19.18                    | 0-5                       | 4        |
|           |            | 12      | 11        | 19.16                    | 0-5                       | 4        |
|           |            | 25      | 0         | 19.17                    | 0-5                       | 4        |

## LTE Band 17 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 23790 Ch. 710 MHz        |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 24.12                    | 0                         | 0        |
|           |            | 1       | 24        | 24.06                    | 0                         | 0        |
|           |            | 1       | 49        | 24.07                    | 0                         | 0        |
|           |            | 25      | 0         | 22.82                    | 0-1                       | 1        |
|           |            | 25      | 12        | 22.72                    | 0-1                       | 1        |
|           |            | 25      | 24        | 22.74                    | 0-1                       | 1        |
|           |            | 50      | 0         | 22.81                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.49                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.30                    | 0-1                       | 1        |
|           |            | 1       | 49        | 22.27                    | 0-1                       | 1        |
|           |            | 25      | 0         | 21.28                    | 0-2                       | 2        |
|           |            | 25      | 12        | 21.21                    | 0-2                       | 2        |
|           |            | 25      | 24        | 21.20                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.25                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.46                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.29                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.27                    | 0-2                       | 2        |
|           |            | 25      | 0         | 20.22                    | 0-3                       | 3        |
|           |            | 25      | 12        | 20.18                    | 0-3                       | 3        |
|           |            | 25      | 24        | 20.17                    | 0-3                       | 3        |
|           |            | 50      | 0         | 20.26                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.42                    | 0-5                       | 4        |
|           |            | 1       | 24        | 20.27                    | 0-5                       | 4        |
|           |            | 1       | 49        | 20.28                    | 0-5                       | 4        |
|           |            | 25      | 0         | 19.26                    | 0-5                       | 4        |
|           |            | 25      | 12        | 19.16                    | 0-5                       | 4        |
|           |            | 25      | 24        | 19.15                    | 0-5                       | 4        |
|           |            | 50      | 0         | 19.17                    | 0-5                       | 4        |

[ LTE Band 25 Conducted Power ]  
LTE Band 25 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26047 Ch. 1850.7 MHz     | 26365 Ch. 1882.5 MHz | 26683 Ch. 1914.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 22.49                    | 22.11                | 22.32                | 0                         | 0        |
|           |            | 1       | 3         | 22.53                    | 22.08                | 22.32                | 0                         | 0        |
|           |            | 1       | 5         | 22.47                    | 22.12                | 22.31                | 0                         | 0        |
|           |            | 3       | 0         | 22.48                    | 22.07                | 22.34                | 0                         | 0        |
|           |            | 3       | 1         | 22.59                    | 22.19                | 22.43                | 0                         | 0        |
|           |            | 3       | 3         | 22.51                    | 22.12                | 22.36                | 0                         | 0        |
|           |            | 6       | 0         | 21.52                    | 21.10                | 21.36                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.82                    | 21.34                | 21.48                | 0-1                       | 1        |
|           |            | 1       | 3         | 21.73                    | 21.11                | 21.40                | 0-1                       | 1        |
|           |            | 1       | 5         | 21.81                    | 21.27                | 21.48                | 0-1                       | 1        |
|           |            | 3       | 0         | 21.61                    | 21.22                | 21.46                | 0-1                       | 1        |
|           |            | 3       | 1         | 21.71                    | 21.32                | 21.48                | 0-1                       | 1        |
|           |            | 3       | 3         | 21.62                    | 21.20                | 21.49                | 0-1                       | 1        |
|           |            | 6       | 0         | 20.56                    | 20.18                | 20.37                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.66                    | 20.32                | 20.41                | 0-2                       | 2        |
|           |            | 1       | 3         | 20.60                    | 20.08                | 20.35                | 0-2                       | 2        |
|           |            | 1       | 5         | 20.69                    | 20.21                | 20.46                | 0-2                       | 2        |
|           |            | 3       | 0         | 20.51                    | 20.10                | 20.36                | 0-2                       | 2        |
|           |            | 3       | 1         | 20.64                    | 20.35                | 20.44                | 0-2                       | 2        |
|           |            | 3       | 3         | 20.62                    | 20.20                | 20.31                | 0-2                       | 2        |
|           |            | 6       | 0         | 19.48                    | 19.13                | 19.36                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.58                    | 17.18                | 17.51                | 0-5                       | 5        |
|           |            | 1       | 3         | 17.49                    | 17.18                | 17.32                | 0-5                       | 5        |
|           |            | 1       | 5         | 17.61                    | 17.15                | 17.60                | 0-5                       | 5        |
|           |            | 3       | 0         | 17.48                    | 17.11                | 17.35                | 0-5                       | 5        |
|           |            | 3       | 1         | 17.49                    | 17.12                | 17.41                | 0-5                       | 5        |
|           |            | 3       | 3         | 17.61                    | 17.15                | 17.40                | 0-5                       | 5        |
|           |            | 6       | 0         | 17.48                    | 17.12                | 17.38                | 0-5                       | 5        |

## LTE Band 25 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26055 Ch. 1851.5 MHz     | 26365 Ch. 1882.5 MHz | 26675 Ch. 1913.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 22.62                    | 22.08                | 22.34                | 0                         | 0        |
|           |            | 1       | 7         | 22.61                    | 22.04                | 22.27                | 0                         | 0        |
|           |            | 1       | 14        | 22.57                    | 22.08                | 22.35                | 0                         | 0        |
|           |            | 8       | 0         | 21.58                    | 21.20                | 21.42                | 0-1                       | 1        |
|           |            | 8       | 3         | 21.60                    | 21.16                | 21.38                | 0-1                       | 1        |
|           |            | 8       | 7         | 21.58                    | 21.17                | 21.40                | 0-1                       | 1        |
|           |            | 15      | 0         | 21.61                    | 21.19                | 21.45                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.81                    | 21.29                | 21.50                | 0-1                       | 1        |
|           |            | 1       | 7         | 21.68                    | 21.24                | 21.41                | 0-1                       | 1        |
|           |            | 1       | 14        | 21.70                    | 21.42                | 21.58                | 0-1                       | 1        |
|           |            | 8       | 0         | 20.63                    | 20.27                | 20.51                | 0-2                       | 2        |
|           |            | 8       | 3         | 20.62                    | 20.17                | 20.41                | 0-2                       | 2        |
|           |            | 8       | 7         | 20.64                    | 20.25                | 20.45                | 0-2                       | 2        |
|           |            | 15      | 0         | 20.61                    | 20.15                | 20.43                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.79                    | 20.21                | 20.50                | 0-2                       | 2        |
|           |            | 1       | 7         | 20.55                    | 20.21                | 20.45                | 0-2                       | 2        |
|           |            | 1       | 14        | 20.59                    | 20.32                | 20.58                | 0-2                       | 2        |
|           |            | 8       | 0         | 19.54                    | 19.14                | 19.43                | 0-3                       | 3        |
|           |            | 8       | 3         | 19.57                    | 19.14                | 19.43                | 0-3                       | 3        |
|           |            | 8       | 7         | 19.60                    | 19.07                | 19.40                | 0-3                       | 3        |
|           |            | 15      | 0         | 19.60                    | 19.19                | 19.45                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.54                    | 17.24                | 17.51                | 0-5                       | 5        |
|           |            | 1       | 7         | 17.58                    | 17.10                | 17.42                | 0-5                       | 5        |
|           |            | 1       | 14        | 17.69                    | 17.10                | 17.50                | 0-5                       | 5        |
|           |            | 8       | 0         | 17.52                    | 17.11                | 17.37                | 0-5                       | 5        |
|           |            | 8       | 3         | 17.50                    | 17.10                | 17.39                | 0-5                       | 5        |
|           |            | 8       | 7         | 17.54                    | 17.15                | 17.36                | 0-5                       | 5        |
|           |            | 15      | 0         | 17.53                    | 17.09                | 17.39                | 0-5                       | 5        |

## LTE Band 25 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26065 Ch. 1852.5 MHz     | 26365 Ch. 1882.5 MHz | 26665 Ch. 1912.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 22.59                    | 22.17                | 22.43                | 0                         | 0        |
|           |            | 1       | 12        | 22.51                    | 22.04                | 22.34                | 0                         | 0        |
|           |            | 1       | 24        | 22.60                    | 22.14                | 22.40                | 0                         | 0        |
|           |            | 12      | 0         | 21.65                    | 21.20                | 21.51                | 0-1                       | 1        |
|           |            | 12      | 6         | 21.65                    | 21.18                | 21.55                | 0-1                       | 1        |
|           |            | 12      | 11        | 21.66                    | 21.21                | 21.52                | 0-1                       | 1        |
|           |            | 25      | 0         | 21.70                    | 21.20                | 21.47                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.76                    | 21.30                | 21.60                | 0-1                       | 1        |
|           |            | 1       | 12        | 21.83                    | 21.31                | 21.63                | 0-1                       | 1        |
|           |            | 1       | 24        | 21.85                    | 21.37                | 21.61                | 0-1                       | 1        |
|           |            | 12      | 0         | 20.68                    | 20.27                | 20.55                | 0-2                       | 2        |
|           |            | 12      | 6         | 20.68                    | 20.20                | 20.52                | 0-2                       | 2        |
|           |            | 12      | 11        | 20.62                    | 20.17                | 20.49                | 0-2                       | 2        |
|           |            | 25      | 0         | 20.67                    | 20.24                | 20.53                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.72                    | 20.28                | 20.59                | 0-2                       | 2        |
|           |            | 1       | 12        | 20.61                    | 20.24                | 20.54                | 0-2                       | 2        |
|           |            | 1       | 24        | 20.73                    | 20.33                | 20.68                | 0-2                       | 2        |
|           |            | 12      | 0         | 19.65                    | 19.17                | 19.51                | 0-3                       | 3        |
|           |            | 12      | 6         | 19.64                    | 19.17                | 19.46                | 0-3                       | 3        |
|           |            | 12      | 11        | 19.63                    | 19.13                | 19.48                | 0-3                       | 3        |
|           |            | 25      | 0         | 19.57                    | 19.12                | 19.50                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.55                    | 17.40                | 17.60                | 0-5                       | 5        |
|           |            | 1       | 12        | 17.50                    | 17.17                | 17.48                | 0-5                       | 5        |
|           |            | 1       | 24        | 17.49                    | 17.23                | 17.47                | 0-5                       | 5        |
|           |            | 12      | 0         | 17.58                    | 17.13                | 17.41                | 0-5                       | 5        |
|           |            | 12      | 6         | 17.54                    | 17.12                | 17.45                | 0-5                       | 5        |
|           |            | 12      | 11        | 17.51                    | 17.17                | 17.49                | 0-5                       | 5        |
|           |            | 25      | 0         | 17.55                    | 17.18                | 17.50                | 0-5                       | 5        |

## LTE Band 25 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26090 Ch. 1855 MHz       | 26365 Ch. 1882.5 MHz | 26640 Ch. 1910 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 22.51                    | 22.16                | 22.64              | 0                         | 0        |
|           |            | 1       | 24        | 22.54                    | 22.11                | 22.57              | 0                         | 0        |
|           |            | 1       | 49        | 22.59                    | 22.19                | 22.62              | 0                         | 0        |
|           |            | 25      | 0         | 21.63                    | 21.20                | 21.68              | 0-1                       | 1        |
|           |            | 25      | 12        | 21.64                    | 21.18                | 21.64              | 0-1                       | 1        |
|           |            | 25      | 24        | 21.63                    | 21.21                | 21.65              | 0-1                       | 1        |
|           |            | 50      | 0         | 21.60                    | 21.18                | 21.66              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.81                    | 21.38                | 21.86              | 0-1                       | 1        |
|           |            | 1       | 24        | 21.74                    | 21.23                | 21.74              | 0-1                       | 1        |
|           |            | 1       | 49        | 21.77                    | 21.40                | 21.70              | 0-1                       | 1        |
|           |            | 25      | 0         | 20.65                    | 20.21                | 20.67              | 0-2                       | 2        |
|           |            | 25      | 12        | 20.66                    | 20.20                | 20.63              | 0-2                       | 2        |
|           |            | 25      | 24        | 20.64                    | 20.19                | 20.66              | 0-2                       | 2        |
|           |            | 50      | 0         | 20.67                    | 20.21                | 20.67              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.73                    | 20.36                | 20.82              | 0-2                       | 2        |
|           |            | 1       | 24        | 20.65                    | 20.26                | 20.73              | 0-2                       | 2        |
|           |            | 1       | 49        | 20.75                    | 20.29                | 20.75              | 0-2                       | 2        |
|           |            | 25      | 0         | 19.60                    | 19.15                | 19.64              | 0-3                       | 3        |
|           |            | 25      | 12        | 19.53                    | 19.14                | 19.59              | 0-3                       | 3        |
|           |            | 25      | 24        | 19.57                    | 19.08                | 19.58              | 0-3                       | 3        |
|           |            | 50      | 0         | 19.60                    | 19.16                | 19.65              | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.62                    | 17.22                | 17.80              | 0-5                       | 5        |
|           |            | 1       | 24        | 17.62                    | 17.18                | 17.73              | 0-5                       | 5        |
|           |            | 1       | 49        | 17.61                    | 17.24                | 17.79              | 0-5                       | 5        |
|           |            | 25      | 0         | 17.54                    | 17.16                | 17.64              | 0-5                       | 5        |
|           |            | 25      | 12        | 17.57                    | 17.18                | 17.62              | 0-5                       | 5        |
|           |            | 25      | 24        | 17.59                    | 17.14                | 17.62              | 0-5                       | 5        |
|           |            | 50      | 0         | 17.57                    | 17.14                | 17.68              | 0-5                       | 5        |

## LTE Band 25 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26115 Ch. 1857.5 MHz     | 26365 Ch. 1882.5 MHz | 26615 Ch. 1907.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 22.52                    | 22.21                | 22.63                | 0                         | 0        |
|           |            | 1       | 36        | 22.37                    | 22.01                | 22.55                | 0                         | 0        |
|           |            | 1       | 74        | 22.57                    | 22.13                | 22.60                | 0                         | 0        |
|           |            | 36      | 0         | 21.56                    | 21.15                | 21.66                | 0-1                       | 1        |
|           |            | 36      | 18        | 21.58                    | 21.14                | 21.64                | 0-1                       | 1        |
|           |            | 36      | 39        | 21.55                    | 21.12                | 21.64                | 0-1                       | 1        |
|           |            | 75      | 0         | 21.56                    | 21.14                | 21.67                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.65                    | 21.32                | 21.79                | 0-1                       | 1        |
|           |            | 1       | 36        | 21.51                    | 21.17                | 21.52                | 0-1                       | 1        |
|           |            | 1       | 74        | 21.73                    | 21.29                | 21.76                | 0-1                       | 1        |
|           |            | 36      | 0         | 20.56                    | 20.18                | 20.65                | 0-2                       | 2        |
|           |            | 36      | 18        | 20.56                    | 20.17                | 20.65                | 0-2                       | 2        |
|           |            | 36      | 39        | 20.57                    | 20.15                | 20.67                | 0-2                       | 2        |
|           |            | 75      | 0         | 20.53                    | 20.11                | 20.67                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.75                    | 20.28                | 20.70                | 0-2                       | 2        |
|           |            | 1       | 36        | 20.60                    | 20.25                | 20.64                | 0-2                       | 2        |
|           |            | 1       | 74        | 20.64                    | 20.32                | 20.79                | 0-2                       | 2        |
|           |            | 36      | 0         | 19.58                    | 19.18                | 19.66                | 0-3                       | 3        |
|           |            | 36      | 18        | 19.54                    | 19.12                | 19.66                | 0-3                       | 3        |
|           |            | 36      | 39        | 19.55                    | 19.10                | 19.67                | 0-3                       | 3        |
|           |            | 75      | 0         | 19.50                    | 19.13                | 19.63                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.70                    | 17.14                | 17.75                | 0-5                       | 5        |
|           |            | 1       | 36        | 17.44                    | 17.23                | 17.70                | 0-5                       | 5        |
|           |            | 1       | 74        | 17.56                    | 17.24                | 17.66                | 0-5                       | 5        |
|           |            | 36      | 0         | 17.52                    | 17.17                | 17.63                | 0-5                       | 5        |
|           |            | 36      | 18        | 17.56                    | 17.16                | 17.59                | 0-5                       | 5        |
|           |            | 36      | 39        | 17.46                    | 17.14                | 17.58                | 0-5                       | 5        |
|           |            | 75      | 0         | 17.54                    | 17.12                | 17.63                | 0-5                       | 5        |

## LTE Band 25 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26140 Ch. 1860 MHz       | 26365 Ch. 1882.5 MHz | 26590 Ch. 1905 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 22.44                    | 22.20                | 22.70              | 0                         | 0        |
|           |            | 1       | 49        | 22.40                    | 22.12                | 22.51              | 0                         | 0        |
|           |            | 1       | 99        | 22.53                    | 22.17                | 22.60              | 0                         | 0        |
|           |            | 50      | 0         | 21.50                    | 21.14                | 21.66              | 0-1                       | 1        |
|           |            | 50      | 25        | 21.47                    | 21.11                | 21.62              | 0-1                       | 1        |
|           |            | 50      | 49        | 21.49                    | 21.11                | 21.60              | 0-1                       | 1        |
|           |            | 100     | 0         | 21.46                    | 21.17                | 21.66              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.68                    | 21.48                | 21.84              | 0-1                       | 1        |
|           |            | 1       | 49        | 21.60                    | 21.23                | 21.71              | 0-1                       | 1        |
|           |            | 1       | 99        | 21.60                    | 21.37                | 21.80              | 0-1                       | 1        |
|           |            | 50      | 0         | 20.50                    | 20.13                | 20.62              | 0-2                       | 2        |
|           |            | 50      | 25        | 20.48                    | 20.15                | 20.56              | 0-2                       | 2        |
|           |            | 50      | 49        | 20.49                    | 20.16                | 20.60              | 0-2                       | 2        |
|           |            | 100     | 0         | 20.47                    | 20.14                | 20.65              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 20.66                    | 20.36                | 20.79              | 0-2                       | 2        |
|           |            | 1       | 49        | 20.57                    | 20.39                | 20.74              | 0-2                       | 2        |
|           |            | 1       | 99        | 20.61                    | 20.45                | 20.77              | 0-2                       | 2        |
|           |            | 50      | 0         | 19.50                    | 19.19                | 19.62              | 0-3                       | 3        |
|           |            | 50      | 25        | 19.48                    | 19.13                | 19.58              | 0-3                       | 3        |
|           |            | 50      | 49        | 19.47                    | 19.15                | 19.60              | 0-3                       | 3        |
|           |            | 100     | 0         | 19.48                    | 19.13                | 19.63              | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 17.59                    | 17.21                | 17.79              | 0-5                       | 5        |
|           |            | 1       | 49        | 17.43                    | 17.19                | 17.65              | 0-5                       | 5        |
|           |            | 1       | 99        | 17.57                    | 17.26                | 17.74              | 0-5                       | 5        |
|           |            | 50      | 0         | 17.47                    | 17.20                | 17.60              | 0-5                       | 5        |
|           |            | 50      | 25        | 17.46                    | 17.13                | 17.60              | 0-5                       | 5        |
|           |            | 50      | 49        | 17.48                    | 17.16                | 17.58              | 0-5                       | 5        |
|           |            | 100     | 0         | 17.45                    | 17.15                | 17.62              | 0-5                       | 5        |

[ LTE Band 26 Conducted Power ]  
LTE Band 26 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 26697 Ch. 814.7 MHz      | 26865 Ch. 831.5 MHz | 27033 Ch. 848.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 23.88                    | 24.04               | 23.94               | 0                         | 0        |
|           |            | 1       | 3         | 23.88                    | 23.99               | 23.99               | 0                         | 0        |
|           |            | 1       | 5         | 23.90                    | 24.01               | 23.96               | 0                         | 0        |
|           |            | 3       | 0         | 23.85                    | 24.01               | 23.94               | 0                         | 0        |
|           |            | 3       | 1         | 23.96                    | 24.15               | 24.09               | 0                         | 0        |
|           |            | 3       | 3         | 23.91                    | 24.04               | 23.99               | 0                         | 0        |
|           |            | 6       | 0         | 22.40                    | 22.51               | 22.54               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.15                    | 22.29               | 22.23               | 0-1                       | 1        |
|           |            | 1       | 3         | 21.99                    | 22.15               | 22.13               | 0-1                       | 1        |
|           |            | 1       | 5         | 22.16                    | 22.31               | 22.18               | 0-1                       | 1        |
|           |            | 3       | 0         | 21.98                    | 22.09               | 22.09               | 0-1                       | 1        |
|           |            | 3       | 1         | 22.01                    | 22.29               | 22.23               | 0-1                       | 1        |
|           |            | 3       | 3         | 22.05                    | 22.09               | 22.22               | 0-1                       | 1        |
|           |            | 6       | 0         | 21.02                    | 21.09               | 21.05               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.08                    | 21.11               | 21.11               | 0-2                       | 2        |
|           |            | 1       | 3         | 20.94                    | 21.02               | 21.03               | 0-2                       | 2        |
|           |            | 1       | 5         | 21.06                    | 21.13               | 21.15               | 0-2                       | 2        |
|           |            | 3       | 0         | 20.86                    | 20.96               | 20.95               | 0-2                       | 2        |
|           |            | 3       | 1         | 21.09                    | 21.13               | 21.09               | 0-2                       | 2        |
|           |            | 3       | 3         | 21.00                    | 21.03               | 21.07               | 0-2                       | 2        |
|           |            | 6       | 0         | 19.99                    | 20.05               | 20.00               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.06                    | 20.17               | 20.07               | 0-5                       | 5        |
|           |            | 1       | 3         | 19.99                    | 20.03               | 20.08               | 0-5                       | 5        |
|           |            | 1       | 5         | 20.09                    | 20.11               | 20.12               | 0-5                       | 5        |
|           |            | 3       | 0         | 19.88                    | 20.02               | 20.00               | 0-5                       | 5        |
|           |            | 3       | 1         | 20.05                    | 20.15               | 20.16               | 0-5                       | 5        |
|           |            | 3       | 3         | 20.03                    | 20.13               | 20.14               | 0-5                       | 5        |
|           |            | 6       | 0         | 18.95                    | 19.06               | 19.02               | 0-5                       | 5        |

## LTE Band 26 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 26705 Ch. 815.5 MHz      | 26865 Ch. 831.5 MHz | 27025 Ch. 847.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 23.85                    | 24.03               | 23.98               | 0                         | 0        |
|           |            | 1       | 7         | 23.82                    | 23.90               | 23.88               | 0                         | 0        |
|           |            | 1       | 14        | 23.96                    | 24.01               | 23.99               | 0                         | 0        |
|           |            | 8       | 0         | 22.47                    | 22.62               | 22.54               | 0-1                       | 1        |
|           |            | 8       | 3         | 22.49                    | 22.53               | 22.49               | 0-1                       | 1        |
|           |            | 8       | 7         | 22.49                    | 22.61               | 22.57               | 0-1                       | 1        |
|           |            | 15      | 0         | 22.53                    | 22.62               | 22.59               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.25                    | 22.26               | 22.22               | 0-1                       | 1        |
|           |            | 1       | 7         | 22.03                    | 22.22               | 22.33               | 0-1                       | 1        |
|           |            | 1       | 14        | 22.07                    | 22.28               | 22.09               | 0-1                       | 1        |
|           |            | 8       | 0         | 21.03                    | 21.17               | 21.16               | 0-2                       | 2        |
|           |            | 8       | 3         | 21.04                    | 21.11               | 21.07               | 0-2                       | 2        |
|           |            | 8       | 7         | 20.98                    | 21.23               | 21.14               | 0-2                       | 2        |
|           |            | 15      | 0         | 21.07                    | 21.13               | 21.11               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.10                    | 21.25               | 21.21               | 0-2                       | 2        |
|           |            | 1       | 7         | 21.04                    | 21.16               | 21.07               | 0-2                       | 2        |
|           |            | 1       | 14        | 21.21                    | 21.16               | 21.15               | 0-2                       | 2        |
|           |            | 8       | 0         | 19.97                    | 20.14               | 20.05               | 0-3                       | 3        |
|           |            | 8       | 3         | 20.00                    | 20.10               | 20.02               | 0-3                       | 3        |
|           |            | 8       | 7         | 20.02                    | 20.10               | 20.12               | 0-3                       | 3        |
|           |            | 15      | 0         | 20.04                    | 20.13               | 20.14               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.15                    | 20.25               | 20.13               | 0-5                       | 5        |
|           |            | 1       | 7         | 19.99                    | 20.07               | 20.04               | 0-5                       | 5        |
|           |            | 1       | 14        | 20.18                    | 20.11               | 20.19               | 0-5                       | 5        |
|           |            | 8       | 0         | 18.97                    | 19.06               | 19.03               | 0-5                       | 5        |
|           |            | 8       | 3         | 18.97                    | 19.04               | 19.04               | 0-5                       | 5        |
|           |            | 8       | 7         | 18.98                    | 19.07               | 19.05               | 0-5                       | 5        |
|           |            | 15      | 0         | 18.96                    | 19.06               | 19.05               | 0-5                       | 5        |

## LTE Band 26 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 26715 Ch. 816.5 MHz      | 26865 Ch. 831.5 MHz | 27015 Ch. 846.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.00                    | 24.13               | 23.94               | 0                         | 0        |
|           |            | 1       | 12        | 23.83                    | 24.00               | 23.90               | 0                         | 0        |
|           |            | 1       | 24        | 23.94                    | 24.06               | 24.01               | 0                         | 0        |
|           |            | 12      | 0         | 22.54                    | 22.66               | 22.60               | 0-1                       | 1        |
|           |            | 12      | 6         | 22.56                    | 22.65               | 22.58               | 0-1                       | 1        |
|           |            | 12      | 11        | 22.56                    | 22.62               | 22.60               | 0-1                       | 1        |
|           |            | 25      | 0         | 22.52                    | 22.62               | 22.61               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.25                    | 22.47               | 22.24               | 0-1                       | 1        |
|           |            | 1       | 12        | 22.24                    | 22.29               | 22.09               | 0-1                       | 1        |
|           |            | 1       | 24        | 22.29                    | 22.38               | 22.31               | 0-1                       | 1        |
|           |            | 12      | 0         | 21.05                    | 21.18               | 21.09               | 0-2                       | 2        |
|           |            | 12      | 6         | 21.01                    | 21.14               | 21.11               | 0-2                       | 2        |
|           |            | 12      | 11        | 21.07                    | 21.15               | 21.09               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.05                    | 21.14               | 21.06               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.12                    | 21.21               | 21.09               | 0-2                       | 2        |
|           |            | 1       | 12        | 21.16                    | 21.15               | 21.05               | 0-2                       | 2        |
|           |            | 1       | 24        | 21.27                    | 21.15               | 21.17               | 0-2                       | 2        |
|           |            | 12      | 0         | 20.05                    | 20.16               | 20.12               | 0-3                       | 3        |
|           |            | 12      | 6         | 20.01                    | 20.19               | 20.10               | 0-3                       | 3        |
|           |            | 12      | 11        | 20.04                    | 20.15               | 20.09               | 0-3                       | 3        |
|           |            | 25      | 0         | 20.07                    | 20.18               | 20.11               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.09                    | 20.29               | 20.26               | 0-5                       | 5        |
|           |            | 1       | 12        | 20.15                    | 20.16               | 20.11               | 0-5                       | 5        |
|           |            | 1       | 24        | 20.15                    | 20.15               | 20.10               | 0-5                       | 5        |
|           |            | 12      | 0         | 19.00                    | 19.09               | 19.02               | 0-5                       | 5        |
|           |            | 12      | 6         | 19.01                    | 19.09               | 19.05               | 0-5                       | 5        |
|           |            | 12      | 11        | 19.01                    | 19.07               | 19.05               | 0-5                       | 5        |
|           |            | 25      | 0         | 19.06                    | 19.15               | 19.12               | 0-5                       | 5        |

## LTE Band 26 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                   | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|-------------------|---------------------------|----------|
|           |            |         |           | 26750 Ch. 820 MHz        | 26865 Ch. 831.5 MHz | 26990 Ch. 844 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 24.01                    | 24.11               | 23.97             | 0                         | 0        |
|           |            | 1       | 24        | 24.03                    | 24.10               | 23.95             | 0                         | 0        |
|           |            | 1       | 49        | 24.03                    | 24.03               | 24.12             | 0                         | 0        |
|           |            | 25      | 0         | 22.57                    | 22.67               | 22.58             | 0-1                       | 1        |
|           |            | 25      | 12        | 22.56                    | 22.61               | 22.58             | 0-1                       | 1        |
|           |            | 25      | 24        | 22.55                    | 22.58               | 22.56             | 0-1                       | 1        |
|           |            | 50      | 0         | 22.56                    | 22.61               | 22.54             | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.24                    | 22.39               | 22.30             | 0-1                       | 1        |
|           |            | 1       | 24        | 21.98                    | 22.28               | 22.25             | 0-1                       | 1        |
|           |            | 1       | 49        | 22.24                    | 22.18               | 22.31             | 0-1                       | 1        |
|           |            | 25      | 0         | 21.09                    | 21.22               | 21.08             | 0-2                       | 2        |
|           |            | 25      | 12        | 21.08                    | 21.16               | 21.16             | 0-2                       | 2        |
|           |            | 25      | 24        | 21.08                    | 21.17               | 21.11             | 0-2                       | 2        |
|           |            | 50      | 0         | 21.08                    | 21.14               | 21.05             | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.24                    | 21.34               | 21.11             | 0-2                       | 2        |
|           |            | 1       | 24        | 21.19                    | 21.35               | 21.21             | 0-2                       | 2        |
|           |            | 1       | 49        | 21.28                    | 21.18               | 21.20             | 0-2                       | 2        |
|           |            | 25      | 0         | 20.07                    | 20.18               | 20.06             | 0-3                       | 3        |
|           |            | 25      | 12        | 20.07                    | 20.16               | 20.01             | 0-3                       | 3        |
|           |            | 25      | 24        | 20.09                    | 20.09               | 20.11             | 0-3                       | 3        |
|           |            | 50      | 0         | 20.03                    | 20.09               | 20.01             | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 20.21                    | 20.33               | 20.19             | 0-5                       | 5        |
|           |            | 1       | 24        | 20.09                    | 20.26               | 20.28             | 0-5                       | 5        |
|           |            | 1       | 49        | 20.17                    | 20.27               | 20.33             | 0-5                       | 5        |
|           |            | 25      | 0         | 19.08                    | 19.22               | 19.05             | 0-5                       | 5        |
|           |            | 25      | 12        | 19.06                    | 19.16               | 19.06             | 0-5                       | 5        |
|           |            | 25      | 24        | 19.10                    | 19.11               | 19.09             | 0-5                       | 5        |
|           |            | 50      | 0         | 19.06                    | 19.10               | 19.01             | 0-5                       | 5        |

## LTE Band 26 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |  | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|--|---------------------------|----------|
|           |            |         |           |                          | 26865 Ch. 831.5 MHz |  |                           |          |
| 15 MHz    | QPSK       | 1       | 0         |                          | 24.15               |  | 0                         | 0        |
|           |            | 1       | 36        |                          | 23.91               |  | 0                         | 0        |
|           |            | 1       | 74        |                          | 24.01               |  | 0                         | 0        |
|           |            | 36      | 0         |                          | 22.64               |  | 0-1                       | 1        |
|           |            | 36      | 18        |                          | 22.62               |  | 0-1                       | 1        |
|           |            | 36      | 39        |                          | 22.52               |  | 0-1                       | 1        |
|           |            | 75      | 0         |                          | 22.59               |  | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         |                          | 22.44               |  | 0-1                       | 1        |
|           |            | 1       | 36        |                          | 22.30               |  | 0-1                       | 1        |
|           |            | 1       | 74        |                          | 22.16               |  | 0-1                       | 1        |
|           |            | 36      | 0         |                          | 21.17               |  | 0-2                       | 2        |
|           |            | 36      | 18        |                          | 21.15               |  | 0-2                       | 2        |
|           |            | 36      | 39        |                          | 21.06               |  | 0-2                       | 2        |
|           |            | 75      | 0         |                          | 21.14               |  | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         |                          | 21.38               |  | 0-2                       | 2        |
|           |            | 1       | 36        |                          | 21.25               |  | 0-2                       | 2        |
|           |            | 1       | 74        |                          | 21.16               |  | 0-2                       | 2        |
|           |            | 36      | 0         |                          | 20.18               |  | 0-3                       | 3        |
|           |            | 36      | 18        |                          | 20.14               |  | 0-3                       | 3        |
|           |            | 36      | 39        |                          | 20.06               |  | 0-3                       | 3        |
|           |            | 75      | 0         |                          | 20.14               |  | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         |                          | 20.37               |  | 0-5                       | 5        |
|           |            | 1       | 36        |                          | 20.21               |  | 0-5                       | 5        |
|           |            | 1       | 74        |                          | 20.06               |  | 0-5                       | 5        |
|           |            | 36      | 0         |                          | 19.19               |  | 0-5                       | 5        |
|           |            | 36      | 18        |                          | 19.15               |  | 0-5                       | 5        |
|           |            | 36      | 39        |                          | 19.04               |  | 0-5                       | 5        |
|           |            | 75      | 0         |                          | 19.12               |  | 0-5                       | 5        |

[ LTE Band 41 Conducted Power ] - Power Class 3  
LTE Band 41 5 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 24.11                    | 23.95                | 23.86                | 23.66                | 24.01                | 0                        | 0        |
|            |            | 1       | 12        | 24.13                    | 23.97                | 23.87                | 23.70                | 24.03                | 0                        | 0        |
|            |            | 1       | 24        | 24.14                    | 23.98                | 23.88                | 23.74                | 24.02                | 0                        | 0        |
|            |            | 12      | 0         | 23.24                    | 23.01                | 22.93                | 22.77                | 23.16                | 0-1                      | 1        |
|            |            | 12      | 6         | 23.21                    | 22.99                | 22.96                | 22.73                | 23.18                | 0-1                      | 1        |
|            |            | 12      | 11        | 23.22                    | 23.00                | 22.95                | 22.74                | 23.18                | 0-1                      | 1        |
|            |            | 25      | 0         | 22.97                    | 23.00                | 22.91                | 22.77                | 23.13                | 0-1                      | 1        |
|            | 16QAM      | 1       | 0         | 22.91                    | 23.00                | 22.81                | 22.74                | 22.99                | 0-1                      | 1        |
|            |            | 1       | 12        | 22.81                    | 22.90                | 22.71                | 22.73                | 22.87                | 0-1                      | 1        |
|            |            | 1       | 24        | 22.84                    | 22.91                | 22.80                | 22.71                | 22.98                | 0-1                      | 1        |
|            |            | 12      | 0         | 21.95                    | 22.00                | 21.93                | 21.76                | 22.18                | 0-2                      | 2        |
|            |            | 12      | 6         | 21.95                    | 21.95                | 21.94                | 21.71                | 22.17                | 0-2                      | 2        |
|            |            | 12      | 11        | 21.98                    | 22.00                | 21.94                | 21.72                | 22.19                | 0-2                      | 2        |
|            |            | 25      | 0         | 21.93                    | 21.99                | 21.89                | 21.73                | 22.14                | 0-2                      | 2        |
|            | 64QAM      | 1       | 0         | 22.09                    | 22.10                | 22.08                | 21.88                | 22.31                | 0-2                      | 2        |
|            |            | 1       | 12        | 21.94                    | 22.00                | 22.01                | 21.84                | 22.16                | 0-2                      | 2        |
|            |            | 1       | 24        | 22.02                    | 22.06                | 22.07                | 21.85                | 22.23                | 0-2                      | 2        |
|            |            | 12      | 0         | 20.97                    | 21.02                | 20.95                | 20.77                | 21.21                | 0-3                      | 3        |
|            |            | 12      | 6         | 20.96                    | 20.95                | 20.93                | 20.73                | 21.23                | 0-3                      | 3        |
|            |            | 12      | 11        | 20.99                    | 21.01                | 20.96                | 20.76                | 21.23                | 0-3                      | 3        |
|            |            | 25      | 0         | 20.93                    | 20.97                | 20.90                | 20.76                | 21.13                | 0-3                      | 3        |
|            | 256QAM     | 1       | 0         | 18.91                    | 18.95                | 18.75                | 18.60                | 19.07                | 0-5                      | 5        |
|            |            | 1       | 12        | 18.79                    | 18.89                | 18.70                | 18.56                | 19.00                | 0-5                      | 5        |
|            |            | 1       | 24        | 18.84                    | 18.95                | 18.70                | 18.57                | 19.03                | 0-5                      | 5        |
|            |            | 12      | 0         | 18.98                    | 19.01                | 18.93                | 18.76                | 19.15                | 0-5                      | 5        |
|            |            | 12      | 6         | 19.00                    | 18.98                | 18.93                | 18.73                | 19.17                | 0-5                      | 5        |
|            |            | 12      | 11        | 18.99                    | 19.01                | 18.93                | 18.73                | 19.16                | 0-5                      | 5        |
|            |            | 25      | 0         | 18.97                    | 19.00                | 18.93                | 18.80                | 19.18                | 0-5                      | 5        |

**LTE Band 41 10 MHz Bandwidth - Power Class 3**

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 24.02                    | 23.93                | 23.87                | 23.80                | 24.06                | 0                         | 0        |
|            |            | 1       | 24        | 23.92                    | 23.82                | 23.73                | 23.67                | 23.93                | 0                         | 0        |
|            |            | 1       | 49        | 23.97                    | 23.85                | 23.73                | 23.70                | 23.85                | 0                         | 0        |
|            |            | 25      | 0         | 23.05                    | 22.95                | 22.84                | 22.81                | 23.12                | 0-1                       | 1        |
|            |            | 25      | 12        | 23.02                    | 22.91                | 22.83                | 22.81                | 23.10                | 0-1                       | 1        |
|            |            | 25      | 24        | 23.03                    | 22.92                | 22.80                | 22.78                | 23.10                | 0-1                       | 1        |
|            |            | 50      | 0         | 23.06                    | 22.96                | 22.87                | 22.84                | 23.16                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 22.98                    | 23.07                | 22.85                | 22.76                | 23.08                | 0-1                       | 1        |
|            |            | 1       | 24        | 22.86                    | 22.94                | 22.69                | 22.65                | 23.02                | 0-1                       | 1        |
|            |            | 1       | 49        | 22.99                    | 23.03                | 22.77                | 22.71                | 23.15                | 0-1                       | 1        |
|            |            | 25      | 0         | 22.10                    | 21.96                | 21.88                | 21.79                | 22.15                | 0-2                       | 2        |
|            |            | 25      | 12        | 22.05                    | 21.91                | 21.86                | 21.78                | 22.13                | 0-2                       | 2        |
|            |            | 25      | 24        | 22.07                    | 21.93                | 21.82                | 21.76                | 22.13                | 0-2                       | 2        |
|            |            | 50      | 0         | 22.06                    | 21.96                | 21.87                | 21.79                | 22.15                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 22.27                    | 22.10                | 22.03                | 21.95                | 22.30                | 0-2                       | 2        |
|            |            | 1       | 24        | 22.17                    | 22.02                | 21.89                | 21.87                | 22.21                | 0-2                       | 2        |
|            |            | 1       | 49        | 22.23                    | 22.09                | 21.96                | 21.89                | 22.24                | 0-2                       | 2        |
|            |            | 25      | 0         | 21.07                    | 20.97                | 20.87                | 20.80                | 21.18                | 0-3                       | 3        |
|            |            | 25      | 12        | 21.02                    | 20.94                | 20.86                | 20.77                | 21.16                | 0-3                       | 3        |
|            |            | 25      | 24        | 21.05                    | 20.95                | 20.85                | 20.76                | 21.16                | 0-3                       | 3        |
|            |            | 50      | 0         | 21.08                    | 20.99                | 20.89                | 20.85                | 21.20                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 18.96                    | 18.85                | 18.80                | 18.67                | 19.09                | 0-5                       | 5        |
|            |            | 1       | 24        | 18.87                    | 18.76                | 18.68                | 18.57                | 18.99                | 0-5                       | 5        |
|            |            | 1       | 49        | 18.90                    | 18.80                | 18.71                | 18.62                | 19.05                | 0-5                       | 5        |
|            |            | 25      | 0         | 19.11                    | 19.00                | 18.90                | 18.83                | 19.21                | 0-5                       | 5        |
|            |            | 25      | 12        | 19.05                    | 18.96                | 18.85                | 18.79                | 19.17                | 0-5                       | 5        |
|            |            | 25      | 24        | 19.07                    | 18.99                | 18.85                | 18.80                | 19.19                | 0-5                       | 5        |
|            |            | 50      | 0         | 19.11                    | 19.01                | 18.93                | 18.89                | 19.23                | 0-5                       | 5        |

## LTE Band 41 \_ 15 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 23.92                    | 23.93                | 23.82                | 23.72                | 24.05                | 0                         | 0        |
|            |            | 1       | 36        | 23.90                    | 23.87                | 23.72                | 23.71                | 24.02                | 0                         | 0        |
|            |            | 1       | 74        | 23.91                    | 23.88                | 23.71                | 23.70                | 24.00                | 0                         | 0        |
|            |            | 36      | 0         | 23.03                    | 22.96                | 22.86                | 22.82                | 23.18                | 0-1                       | 1        |
|            |            | 36      | 18        | 23.00                    | 22.95                | 22.82                | 22.79                | 23.15                | 0-1                       | 1        |
|            |            | 36      | 39        | 22.99                    | 22.93                | 22.79                | 22.78                | 23.12                | 0-1                       | 1        |
|            |            | 75      | 0         | 22.99                    | 22.95                | 22.82                | 22.82                | 23.14                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 23.06                    | 22.97                | 22.82                | 22.76                | 23.14                | 0-1                       | 1        |
|            |            | 1       | 36        | 22.95                    | 22.74                | 22.62                | 22.62                | 22.96                | 0-1                       | 1        |
|            |            | 1       | 74        | 22.95                    | 22.83                | 22.68                | 22.62                | 22.99                | 0-1                       | 1        |
|            |            | 36      | 0         | 22.04                    | 21.92                | 21.86                | 21.78                | 22.19                | 0-2                       | 2        |
|            |            | 36      | 18        | 22.01                    | 21.91                | 21.81                | 21.74                | 22.16                | 0-2                       | 2        |
|            |            | 36      | 39        | 21.99                    | 21.91                | 21.78                | 21.73                | 22.12                | 0-2                       | 2        |
|            |            | 75      | 0         | 22.04                    | 21.93                | 21.80                | 21.79                | 22.16                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 22.09                    | 22.02                | 22.08                | 21.95                | 22.25                | 0-2                       | 2        |
|            |            | 1       | 36        | 21.93                    | 21.86                | 21.81                | 21.82                | 22.06                | 0-2                       | 2        |
|            |            | 1       | 74        | 21.96                    | 21.95                | 21.87                | 21.82                | 22.14                | 0-2                       | 2        |
|            |            | 36      | 0         | 21.08                    | 20.96                | 20.85                | 20.82                | 21.20                | 0-3                       | 3        |
|            |            | 36      | 18        | 21.03                    | 20.93                | 20.81                | 20.75                | 21.19                | 0-3                       | 3        |
|            |            | 36      | 39        | 21.02                    | 20.92                | 20.78                | 20.75                | 21.16                | 0-3                       | 3        |
|            |            | 75      | 0         | 21.04                    | 20.93                | 20.84                | 20.82                | 21.18                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 18.94                    | 18.91                | 18.87                | 18.76                | 19.19                | 0-5                       | 5        |
|            |            | 1       | 36        | 18.82                    | 18.76                | 18.60                | 18.68                | 18.99                | 0-5                       | 5        |
|            |            | 1       | 74        | 18.82                    | 18.87                | 18.73                | 18.67                | 19.11                | 0-5                       | 5        |
|            |            | 36      | 0         | 19.10                    | 18.98                | 18.90                | 18.86                | 19.22                | 0-5                       | 5        |
|            |            | 36      | 18        | 19.06                    | 18.96                | 18.85                | 18.81                | 19.21                | 0-5                       | 5        |
|            |            | 36      | 39        | 19.05                    | 18.96                | 18.84                | 18.81                | 19.19                | 0-5                       | 5        |
|            |            | 75      | 0         | 19.04                    | 18.94                | 18.82                | 18.80                | 19.19                | 0-5                       | 5        |

## LTE Band 41 20 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 23.96                    | 23.92                | 23.87                | 23.81                | 24.09                | 0                         | 0        |
|            |            | 1       | 49        | 23.82                    | 23.76                | 23.64                | 23.64                | 23.89                | 0                         | 0        |
|            |            | 1       | 99        | 23.87                    | 23.80                | 23.62                | 23.66                | 23.96                | 0                         | 0        |
|            |            | 50      | 0         | 23.07                    | 22.97                | 22.87                | 22.87                | 23.25                | 0-1                       | 1        |
|            |            | 50      | 25        | 23.01                    | 22.91                | 22.79                | 22.83                | 23.21                | 0-1                       | 1        |
|            |            | 50      | 49        | 23.00                    | 22.93                | 22.77                | 22.82                | 23.20                | 0-1                       | 1        |
|            |            | 100     | 0         | 23.00                    | 22.93                | 22.81                | 22.82                | 23.18                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 23.10                    | 23.08                | 22.85                | 22.76                | 23.13                | 0-1                       | 1        |
|            |            | 1       | 49        | 22.89                    | 22.87                | 22.66                | 22.57                | 22.96                | 0-1                       | 1        |
|            |            | 1       | 99        | 22.93                    | 22.93                | 22.71                | 22.62                | 23.04                | 0-1                       | 1        |
|            |            | 50      | 0         | 22.06                    | 21.99                | 21.88                | 21.86                | 22.25                | 0-2                       | 2        |
|            |            | 50      | 25        | 22.01                    | 21.94                | 21.80                | 21.80                | 22.20                | 0-2                       | 2        |
|            |            | 50      | 49        | 22.01                    | 21.95                | 21.76                | 21.78                | 22.19                | 0-2                       | 2        |
|            |            | 100     | 0         | 22.08                    | 21.99                | 21.86                | 21.85                | 22.23                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 22.35                    | 22.15                | 22.12                | 21.96                | 22.38                | 0-2                       | 2        |
|            |            | 1       | 49        | 22.18                    | 22.00                | 21.92                | 21.80                | 22.27                | 0-2                       | 2        |
|            |            | 1       | 99        | 22.21                    | 22.03                | 21.91                | 21.94                | 22.20                | 0-2                       | 2        |
|            |            | 50      | 0         | 21.10                    | 21.00                | 20.92                | 20.90                | 21.26                | 0-3                       | 3        |
|            |            | 50      | 25        | 21.04                    | 20.95                | 20.85                | 20.86                | 21.22                | 0-3                       | 3        |
|            |            | 50      | 49        | 21.03                    | 20.97                | 20.82                | 20.84                | 21.21                | 0-3                       | 3        |
|            |            | 100     | 0         | 21.02                    | 20.95                | 20.82                | 20.83                | 21.21                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 19.11                    | 18.92                | 18.93                | 18.72                | 19.15                | 0-5                       | 5        |
|            |            | 1       | 49        | 18.89                    | 18.75                | 18.66                | 18.53                | 18.98                | 0-5                       | 5        |
|            |            | 1       | 99        | 18.94                    | 18.83                | 18.70                | 18.64                | 19.01                | 0-5                       | 5        |
|            |            | 50      | 0         | 19.12                    | 19.05                | 18.97                | 18.93                | 19.31                | 0-5                       | 5        |
|            |            | 50      | 25        | 19.08                    | 19.00                | 18.89                | 18.89                | 19.26                | 0-5                       | 5        |
|            |            | 50      | 49        | 19.06                    | 19.01                | 18.85                | 18.85                | 19.25                | 0-5                       | 5        |
|            |            | 100     | 0         | 19.01                    | 18.94                | 18.83                | 18.82                | 19.21                | 0-5                       | 5        |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[ LTE Band 41 Conducted Power ] - Power Class 2  
LTE Band 41 5 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 25.05                    | 25.02                | 24.93                | 24.93                | 25.16                | 0                        | 0        |
|            |            | 1       | 12        | 25.05                    | 24.99                | 24.84                | 24.91                | 25.11                | 0                        | 0        |
|            |            | 1       | 24        | 25.05                    | 25.00                | 24.89                | 24.90                | 25.13                | 0                        | 0        |
|            |            | 12      | 0         | 24.10                    | 24.04                | 23.95                | 23.93                | 24.27                | 0-1                      | 1        |
|            |            | 12      | 6         | 24.06                    | 24.06                | 23.95                | 23.93                | 24.28                | 0-1                      | 1        |
|            |            | 12      | 11        | 24.06                    | 24.06                | 23.94                | 23.93                | 24.25                | 0-1                      | 1        |
|            |            | 25      | 0         | 24.11                    | 24.04                | 23.92                | 23.93                | 24.25                | 0-1                      | 1        |
|            | 16QAM      | 1       | 0         | 24.46                    | 24.35                | 24.08                | 23.93                | 24.46                | 0-1                      | 1        |
|            |            | 1       | 12        | 24.43                    | 24.26                | 23.94                | 23.66                | 24.38                | 0-1                      | 1        |
|            |            | 1       | 24        | 24.43                    | 24.36                | 24.05                | 23.69                | 24.43                | 0-1                      | 1        |
|            |            | 12      | 0         | 23.24                    | 23.08                | 23.02                | 22.95                | 23.23                | 0-2                      | 2        |
|            |            | 12      | 6         | 23.20                    | 23.05                | 23.00                | 22.89                | 23.25                | 0-2                      | 2        |
|            |            | 12      | 11        | 23.20                    | 23.05                | 22.96                | 22.87                | 23.21                | 0-2                      | 2        |
|            |            | 25      | 0         | 23.14                    | 22.98                | 22.97                | 22.91                | 23.32                | 0-2                      | 2        |
|            | 64QAM      | 1       | 0         | 23.40                    | 23.37                | 23.43                | 23.26                | 23.54                | 0-2                      | 2        |
|            |            | 1       | 12        | 23.45                    | 23.36                | 23.40                | 23.14                | 23.52                | 0-2                      | 2        |
|            |            | 1       | 24        | 23.41                    | 23.43                | 23.45                | 23.29                | 23.56                | 0-2                      | 2        |
|            |            | 12      | 0         | 22.20                    | 22.06                | 21.85                | 21.86                | 22.43                | 0-3                      | 3        |
|            |            | 12      | 6         | 22.01                    | 22.07                | 21.98                | 21.83                | 22.41                | 0-3                      | 3        |
|            |            | 12      | 11        | 22.02                    | 22.06                | 22.00                | 21.84                | 22.39                | 0-3                      | 3        |
|            |            | 25      | 0         | 22.15                    | 22.06                | 21.90                | 21.87                | 22.21                | 0-3                      | 3        |
|            | 256QAM     | 1       | 0         | 20.10                    | 20.16                | 19.88                | 19.52                | 20.09                | 0-5                      | 5        |
|            |            | 1       | 12        | 20.07                    | 20.14                | 19.81                | 19.61                | 20.03                | 0-5                      | 5        |
|            |            | 1       | 24        | 20.02                    | 20.13                | 19.88                | 19.55                | 20.07                | 0-5                      | 5        |
|            |            | 12      | 0         | 20.17                    | 20.12                | 19.98                | 19.92                | 20.33                | 0-5                      | 5        |
|            |            | 12      | 6         | 20.15                    | 20.14                | 19.95                | 19.90                | 20.33                | 0-5                      | 5        |
|            |            | 12      | 11        | 20.15                    | 20.10                | 19.96                | 19.92                | 20.31                | 0-5                      | 5        |
|            |            | 25      | 0         | 20.23                    | 20.09                | 19.96                | 19.96                | 20.33                | 0-5                      | 5        |

**LTE Band 41 10 MHz Bandwidth - Power Class 2**

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 25.15                    | 25.11                | 24.99                | 24.84                | 25.15                | 0                         | 0        |
|            |            | 1       | 24        | 25.11                    | 25.04                | 24.95                | 24.80                | 25.07                | 0                         | 0        |
|            |            | 1       | 49        | 25.10                    | 25.04                | 24.90                | 24.85                | 25.06                | 0                         | 0        |
|            |            | 25      | 0         | 24.18                    | 24.09                | 24.00                | 23.90                | 24.25                | 0-1                       | 1        |
|            |            | 25      | 12        | 24.15                    | 24.06                | 23.96                | 23.87                | 24.21                | 0-1                       | 1        |
|            |            | 25      | 24        | 24.13                    | 24.06                | 23.92                | 23.87                | 24.20                | 0-1                       | 1        |
|            |            | 50      | 0         | 24.09                    | 24.07                | 23.93                | 23.90                | 24.21                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 24.25                    | 24.31                | 24.37                | 24.37                | 24.56                | 0-1                       | 1        |
|            |            | 1       | 24        | 24.10                    | 24.47                | 24.25                | 24.13                | 24.37                | 0-1                       | 1        |
|            |            | 1       | 49        | 24.16                    | 24.50                | 24.24                | 24.28                | 24.43                | 0-1                       | 1        |
|            |            | 25      | 0         | 23.22                    | 23.17                | 23.07                | 22.97                | 23.29                | 0-2                       | 2        |
|            |            | 25      | 12        | 23.23                    | 23.14                | 22.97                | 22.92                | 23.25                | 0-2                       | 2        |
|            |            | 25      | 24        | 23.20                    | 23.14                | 22.92                | 22.92                | 23.25                | 0-2                       | 2        |
|            |            | 50      | 0         | 23.15                    | 23.10                | 22.94                | 22.86                | 23.20                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 23.44                    | 23.50                | 23.43                | 22.78                | 23.65                | 0-2                       | 2        |
|            |            | 1       | 24        | 23.68                    | 23.42                | 23.37                | 23.20                | 23.57                | 0-2                       | 2        |
|            |            | 1       | 49        | 23.65                    | 23.42                | 23.30                | 23.16                | 23.55                | 0-2                       | 2        |
|            |            | 25      | 0         | 22.23                    | 22.10                | 22.04                | 21.93                | 22.32                | 0-3                       | 3        |
|            |            | 25      | 12        | 22.21                    | 22.12                | 22.01                | 21.89                | 22.27                | 0-3                       | 3        |
|            |            | 25      | 24        | 22.19                    | 22.12                | 21.99                | 21.87                | 22.27                | 0-3                       | 3        |
|            |            | 50      | 0         | 22.16                    | 22.15                | 22.01                | 21.90                | 22.26                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 19.86                    | 19.93                | 20.14                | 19.69                | 20.28                | 0-5                       | 5        |
|            |            | 1       | 24        | 19.75                    | 19.85                | 20.08                | 19.62                | 20.22                | 0-5                       | 5        |
|            |            | 1       | 49        | 19.77                    | 19.88                | 20.07                | 19.64                | 20.24                | 0-5                       | 5        |
|            |            | 25      | 0         | 20.25                    | 20.15                | 20.05                | 19.94                | 20.31                | 0-5                       | 5        |
|            |            | 25      | 12        | 20.23                    | 20.13                | 20.03                | 19.91                | 20.29                | 0-5                       | 5        |
|            |            | 25      | 24        | 20.22                    | 20.12                | 19.99                | 19.90                | 20.31                | 0-5                       | 5        |
|            |            | 50      | 0         | 20.20                    | 20.19                | 20.03                | 19.95                | 20.30                | 0-5                       | 5        |

## LTE Band 41 \_ 15 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 25.09                    | 25.01                | 24.96                | 24.91                | 25.15                | 0                         | 0        |
|            |            | 1       | 36        | 25.08                    | 24.94                | 24.81                | 24.84                | 25.05                | 0                         | 0        |
|            |            | 1       | 74        | 25.04                    | 24.93                | 24.82                | 24.82                | 25.05                | 0                         | 0        |
|            |            | 36      | 0         | 24.19                    | 24.04                | 23.96                | 23.92                | 24.23                | 0-1                       | 1        |
|            |            | 36      | 18        | 24.14                    | 23.99                | 23.93                | 23.88                | 24.20                | 0-1                       | 1        |
|            |            | 36      | 39        | 24.14                    | 23.99                | 23.86                | 23.86                | 24.19                | 0-1                       | 1        |
|            |            | 75      | 0         | 24.16                    | 24.02                | 23.91                | 23.89                | 24.22                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 24.17                    | 24.38                | 24.30                | 23.85                | 24.43                | 0-1                       | 1        |
|            |            | 1       | 36        | 24.12                    | 24.23                | 24.14                | 23.59                | 24.22                | 0-1                       | 1        |
|            |            | 1       | 74        | 24.05                    | 24.32                | 24.15                | 23.58                | 24.31                | 0-1                       | 1        |
|            |            | 36      | 0         | 23.15                    | 23.01                | 22.92                | 22.96                | 23.24                | 0-2                       | 2        |
|            |            | 36      | 18        | 23.11                    | 22.99                | 22.89                | 22.85                | 23.22                | 0-2                       | 2        |
|            |            | 36      | 39        | 23.09                    | 22.98                | 22.82                | 22.83                | 23.20                | 0-2                       | 2        |
|            |            | 75      | 0         | 23.18                    | 23.05                | 22.92                | 22.87                | 23.25                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 23.38                    | 23.44                | 23.35                | 23.25                | 23.55                | 0-2                       | 2        |
|            |            | 1       | 36        | 23.40                    | 23.33                | 23.15                | 23.15                | 23.34                | 0-2                       | 2        |
|            |            | 1       | 74        | 23.44                    | 23.39                | 23.22                | 23.14                | 23.36                | 0-2                       | 2        |
|            |            | 36      | 0         | 22.18                    | 22.10                | 21.98                | 21.91                | 22.26                | 0-3                       | 3        |
|            |            | 36      | 18        | 22.11                    | 22.07                | 21.96                | 21.87                | 22.23                | 0-3                       | 3        |
|            |            | 36      | 39        | 22.09                    | 22.07                | 21.90                | 21.84                | 22.21                | 0-3                       | 3        |
|            |            | 75      | 0         | 22.16                    | 22.07                | 21.94                | 21.86                | 22.24                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 19.75                    | 19.70                | 20.15                | 19.81                | 19.95                | 0-5                       | 5        |
|            |            | 1       | 36        | 19.70                    | 20.17                | 20.00                | 19.74                | 19.83                | 0-5                       | 5        |
|            |            | 1       | 74        | 19.66                    | 20.20                | 20.03                | 19.70                | 19.89                | 0-5                       | 5        |
|            |            | 36      | 0         | 20.15                    | 20.09                | 19.96                | 19.93                | 20.32                | 0-5                       | 5        |
|            |            | 36      | 18        | 20.11                    | 20.06                | 19.96                | 19.89                | 20.30                | 0-5                       | 5        |
|            |            | 36      | 39        | 20.10                    | 20.06                | 19.90                | 19.88                | 20.28                | 0-5                       | 5        |
|            |            | 75      | 0         | 20.15                    | 20.07                | 19.95                | 19.88                | 20.23                | 0-5                       | 5        |

**LTE Band 41 20 MHz Bandwidth - Power Class 2**

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 25.16                    | 25.15                | 25.06                | 24.94                | 25.17                | 0                         | 0        |
|            |            | 1       | 49        | 25.05                    | 24.99                | 24.88                | 24.79                | 25.02                | 0                         | 0        |
|            |            | 1       | 99        | 25.07                    | 24.99                | 24.81                | 24.76                | 25.02                | 0                         | 0        |
|            |            | 50      | 0         | 24.15                    | 24.09                | 23.98                | 23.91                | 24.22                | 0-1                       | 1        |
|            |            | 50      | 25        | 24.08                    | 24.03                | 23.89                | 23.85                | 24.17                | 0-1                       | 1        |
|            |            | 50      | 49        | 24.08                    | 24.04                | 23.86                | 23.83                | 24.16                | 0-1                       | 1        |
|            |            | 100     | 0         | 24.15                    | 24.07                | 23.96                | 23.90                | 24.24                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 24.32                    | 24.36                | 24.47                | 23.95                | 24.54                | 0-1                       | 1        |
|            |            | 1       | 49        | 24.09                    | 24.09                | 24.23                | 23.63                | 24.34                | 0-1                       | 1        |
|            |            | 1       | 99        | 24.17                    | 24.12                | 24.19                | 23.76                | 24.33                | 0-1                       | 1        |
|            |            | 50      | 0         | 23.15                    | 23.11                | 22.99                | 22.90                | 23.25                | 0-2                       | 2        |
|            |            | 50      | 25        | 23.14                    | 23.07                | 22.90                | 22.85                | 23.16                | 0-2                       | 2        |
|            |            | 50      | 49        | 23.12                    | 23.05                | 22.86                | 22.83                | 23.13                | 0-2                       | 2        |
|            |            | 100     | 0         | 23.21                    | 23.14                | 23.01                | 22.93                | 23.25                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 23.61                    | 23.69                | 23.45                | 23.29                | 23.65                | 0-2                       | 2        |
|            |            | 1       | 49        | 23.68                    | 23.56                | 23.34                | 23.04                | 23.48                | 0-2                       | 2        |
|            |            | 1       | 99        | 23.66                    | 23.56                | 23.27                | 22.99                | 23.42                | 0-2                       | 2        |
|            |            | 50      | 0         | 22.23                    | 22.14                | 22.05                | 21.93                | 22.28                | 0-3                       | 3        |
|            |            | 50      | 25        | 22.16                    | 22.10                | 21.98                | 21.87                | 22.25                | 0-3                       | 3        |
|            |            | 50      | 49        | 22.14                    | 22.08                | 21.95                | 21.85                | 22.21                | 0-3                       | 3        |
|            |            | 100     | 0         | 22.19                    | 22.11                | 21.98                | 21.90                | 22.22                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 19.93                    | 19.96                | 20.27                | 19.97                | 20.46                | 0-5                       | 5        |
|            |            | 1       | 49        | 19.79                    | 19.84                | 20.15                | 19.77                | 20.36                | 0-5                       | 5        |
|            |            | 1       | 99        | 19.83                    | 19.88                | 20.10                | 19.82                | 20.39                | 0-5                       | 5        |
|            |            | 50      | 0         | 20.26                    | 20.17                | 20.10                | 19.96                | 20.32                | 0-5                       | 5        |
|            |            | 50      | 25        | 20.20                    | 20.16                | 20.02                | 19.90                | 20.27                | 0-5                       | 5        |
|            |            | 50      | 49        | 20.18                    | 20.13                | 19.97                | 19.86                | 20.23                | 0-5                       | 5        |
|            |            | 100     | 0         | 20.17                    | 20.10                | 19.98                | 19.88                | 20.21                | 0-5                       | 5        |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 131979 Ch.<br>1710.7 MHz | 132322 Ch.<br>1745 MHz | 132665 Ch.<br>1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 23.12                    | 22.48                  | 22.79                    | 0                         | 0        |
|           |            | 1       | 3         | 23.13                    | 22.52                  | 22.81                    | 0                         | 0        |
|           |            | 1       | 5         | 23.15                    | 22.49                  | 22.84                    | 0                         | 0        |
|           |            | 3       | 0         | 23.13                    | 22.50                  | 22.79                    | 0                         | 0        |
|           |            | 3       | 1         | 23.26                    | 22.61                  | 22.94                    | 0                         | 0        |
|           |            | 3       | 3         | 23.19                    | 22.55                  | 22.84                    | 0                         | 0        |
|           |            | 6       | 0         | 22.18                    | 21.53                  | 21.83                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.29                    | 21.64                  | 21.95                    | 0-1                       | 1        |
|           |            | 1       | 3         | 22.28                    | 21.59                  | 21.95                    | 0-1                       | 1        |
|           |            | 1       | 5         | 22.36                    | 21.73                  | 22.05                    | 0-1                       | 1        |
|           |            | 3       | 0         | 22.31                    | 21.59                  | 21.86                    | 0-1                       | 1        |
|           |            | 3       | 1         | 22.49                    | 21.69                  | 22.08                    | 0-1                       | 1        |
|           |            | 3       | 3         | 22.34                    | 21.71                  | 21.88                    | 0-1                       | 1        |
|           |            | 6       | 0         | 21.27                    | 20.63                  | 20.96                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.31                    | 20.69                  | 21.04                    | 0-2                       | 2        |
|           |            | 1       | 3         | 21.29                    | 20.67                  | 20.97                    | 0-2                       | 2        |
|           |            | 1       | 5         | 21.30                    | 20.73                  | 21.04                    | 0-2                       | 2        |
|           |            | 3       | 0         | 21.21                    | 20.50                  | 20.92                    | 0-2                       | 2        |
|           |            | 3       | 1         | 21.42                    | 20.67                  | 21.05                    | 0-2                       | 2        |
|           |            | 3       | 3         | 21.33                    | 20.60                  | 21.01                    | 0-2                       | 2        |
|           |            | 6       | 0         | 20.20                    | 19.52                  | 19.94                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.31                    | 17.58                  | 17.89                    | 0-5                       | 5        |
|           |            | 1       | 3         | 18.26                    | 17.51                  | 17.82                    | 0-5                       | 5        |
|           |            | 1       | 5         | 18.27                    | 17.66                  | 17.90                    | 0-5                       | 5        |
|           |            | 3       | 0         | 18.22                    | 17.48                  | 17.77                    | 0-5                       | 5        |
|           |            | 3       | 1         | 18.28                    | 17.58                  | 17.93                    | 0-5                       | 5        |
|           |            | 3       | 3         | 18.24                    | 17.60                  | 17.90                    | 0-5                       | 5        |
|           |            | 6       | 0         | 18.22                    | 17.39                  | 17.75                    | 0-5                       | 5        |

## LTE Band 66 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 131987 Ch.<br>1711.5 MHz | 132322 Ch.<br>1745 MHz | 132657 Ch.<br>1778.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 23.07                    | 22.52                  | 22.81                    | 0                         | 0        |
|           |            | 1       | 7         | 23.11                    | 22.48                  | 22.73                    | 0                         | 0        |
|           |            | 1       | 14        | 23.21                    | 22.56                  | 22.86                    | 0                         | 0        |
|           |            | 8       | 0         | 22.26                    | 21.60                  | 21.91                    | 0-1                       | 1        |
|           |            | 8       | 3         | 22.27                    | 21.62                  | 21.87                    | 0-1                       | 1        |
|           |            | 8       | 7         | 22.31                    | 21.62                  | 21.93                    | 0-1                       | 1        |
|           |            | 15      | 0         | 22.32                    | 21.59                  | 21.90                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.31                    | 21.76                  | 22.11                    | 0-1                       | 1        |
|           |            | 1       | 7         | 22.29                    | 21.77                  | 22.09                    | 0-1                       | 1        |
|           |            | 1       | 14        | 22.34                    | 21.76                  | 22.04                    | 0-1                       | 1        |
|           |            | 8       | 0         | 21.36                    | 20.68                  | 21.03                    | 0-2                       | 2        |
|           |            | 8       | 3         | 21.29                    | 20.62                  | 20.99                    | 0-2                       | 2        |
|           |            | 8       | 7         | 21.34                    | 20.68                  | 21.05                    | 0-2                       | 2        |
|           |            | 15      | 0         | 21.33                    | 20.61                  | 21.00                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.35                    | 20.68                  | 21.07                    | 0-2                       | 2        |
|           |            | 1       | 7         | 21.24                    | 20.68                  | 21.03                    | 0-2                       | 2        |
|           |            | 1       | 14        | 21.30                    | 20.65                  | 21.08                    | 0-2                       | 2        |
|           |            | 8       | 0         | 20.26                    | 19.55                  | 19.95                    | 0-3                       | 3        |
|           |            | 8       | 3         | 20.25                    | 19.63                  | 19.91                    | 0-3                       | 3        |
|           |            | 8       | 7         | 20.32                    | 19.63                  | 20.02                    | 0-3                       | 3        |
|           |            | 15      | 0         | 20.34                    | 19.61                  | 20.00                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.22                    | 17.67                  | 17.86                    | 0-5                       | 5        |
|           |            | 1       | 7         | 18.19                    | 17.55                  | 17.95                    | 0-5                       | 5        |
|           |            | 1       | 14        | 18.30                    | 17.57                  | 17.94                    | 0-5                       | 5        |
|           |            | 8       | 0         | 18.26                    | 17.51                  | 17.84                    | 0-5                       | 5        |
|           |            | 8       | 3         | 18.26                    | 17.50                  | 17.81                    | 0-5                       | 5        |
|           |            | 8       | 7         | 18.23                    | 17.52                  | 17.82                    | 0-5                       | 5        |
|           |            | 15      | 0         | 18.25                    | 17.50                  | 17.83                    | 0-5                       | 5        |

## LTE Band 66 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-----------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 131997 Ch.<br>1712.5 MHz | 132322Ch.<br>1745 MHz | 132647 Ch.<br>1777.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.20                    | 22.53                 | 22.84                    | 0                         | 0        |
|           |            | 1       | 12        | 23.12                    | 22.49                 | 22.76                    | 0                         | 0        |
|           |            | 1       | 24        | 23.19                    | 22.57                 | 22.83                    | 0                         | 0        |
|           |            | 12      | 0         | 22.31                    | 21.65                 | 21.94                    | 0-1                       | 1        |
|           |            | 12      | 6         | 22.30                    | 21.69                 | 21.92                    | 0-1                       | 1        |
|           |            | 12      | 11        | 22.30                    | 21.69                 | 21.93                    | 0-1                       | 1        |
|           |            | 25      | 0         | 22.29                    | 21.68                 | 21.91                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.32                    | 21.77                 | 22.01                    | 0-1                       | 1        |
|           |            | 1       | 12        | 22.29                    | 21.69                 | 21.94                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.43                    | 21.87                 | 22.02                    | 0-1                       | 1        |
|           |            | 12      | 0         | 21.32                    | 20.70                 | 21.02                    | 0-2                       | 2        |
|           |            | 12      | 6         | 21.34                    | 20.69                 | 20.98                    | 0-2                       | 2        |
|           |            | 12      | 11        | 21.32                    | 20.67                 | 20.99                    | 0-2                       | 2        |
|           |            | 25      | 0         | 21.32                    | 20.65                 | 21.02                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.31                    | 20.74                 | 21.06                    | 0-2                       | 2        |
|           |            | 1       | 12        | 21.27                    | 20.66                 | 20.92                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.42                    | 20.77                 | 21.18                    | 0-2                       | 2        |
|           |            | 12      | 0         | 20.32                    | 19.64                 | 19.93                    | 0-3                       | 3        |
|           |            | 12      | 6         | 20.31                    | 19.62                 | 19.96                    | 0-3                       | 3        |
|           |            | 12      | 11        | 20.32                    | 19.64                 | 19.96                    | 0-3                       | 3        |
|           |            | 25      | 0         | 20.28                    | 19.63                 | 19.97                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.23                    | 17.61                 | 17.87                    | 0-5                       | 5        |
|           |            | 1       | 12        | 18.07                    | 17.55                 | 17.63                    | 0-5                       | 5        |
|           |            | 1       | 24        | 18.27                    | 17.59                 | 17.76                    | 0-5                       | 5        |
|           |            | 12      | 0         | 18.22                    | 17.55                 | 17.84                    | 0-5                       | 5        |
|           |            | 12      | 6         | 18.21                    | 17.54                 | 17.80                    | 0-5                       | 5        |
|           |            | 12      | 11        | 18.23                    | 17.54                 | 17.80                    | 0-5                       | 5        |
|           |            | 25      | 0         | 18.27                    | 17.53                 | 17.84                    | 0-5                       | 5        |

## LTE Band 66 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 132022 Ch.<br>1715 MHz   | 132322 Ch.<br>1745 MHz | 132622 Ch.<br>1775 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.14                    | 22.57                  | 22.87                  | 0                         | 0        |
|           |            | 1       | 24        | 23.15                    | 22.54                  | 22.82                  | 0                         | 0        |
|           |            | 1       | 49        | 23.23                    | 22.62                  | 22.89                  | 0                         | 0        |
|           |            | 25      | 0         | 22.24                    | 21.66                  | 21.90                  | 0-1                       | 1        |
|           |            | 25      | 12        | 22.25                    | 21.65                  | 21.85                  | 0-1                       | 1        |
|           |            | 25      | 24        | 22.26                    | 21.63                  | 21.90                  | 0-1                       | 1        |
|           |            | 50      | 0         | 22.23                    | 21.62                  | 21.85                  | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.36                    | 21.77                  | 22.06                  | 0-1                       | 1        |
|           |            | 1       | 24        | 22.15                    | 21.75                  | 21.92                  | 0-1                       | 1        |
|           |            | 1       | 49        | 22.28                    | 21.74                  | 22.03                  | 0-1                       | 1        |
|           |            | 25      | 0         | 21.30                    | 20.75                  | 20.95                  | 0-2                       | 2        |
|           |            | 25      | 12        | 21.28                    | 20.64                  | 20.99                  | 0-2                       | 2        |
|           |            | 25      | 24        | 21.25                    | 20.69                  | 20.98                  | 0-2                       | 2        |
|           |            | 50      | 0         | 21.26                    | 20.63                  | 20.89                  | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.30                    | 20.85                  | 21.03                  | 0-2                       | 2        |
|           |            | 1       | 24        | 21.36                    | 20.74                  | 21.00                  | 0-2                       | 2        |
|           |            | 1       | 49        | 21.29                    | 20.72                  | 21.08                  | 0-2                       | 2        |
|           |            | 25      | 0         | 20.26                    | 19.58                  | 19.89                  | 0-3                       | 3        |
|           |            | 25      | 12        | 20.19                    | 19.61                  | 19.92                  | 0-3                       | 3        |
|           |            | 25      | 24        | 20.19                    | 19.62                  | 19.93                  | 0-3                       | 3        |
|           |            | 50      | 0         | 20.26                    | 19.65                  | 19.93                  | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.27                    | 17.65                  | 17.87                  | 0-5                       | 5        |
|           |            | 1       | 24        | 18.16                    | 17.65                  | 17.89                  | 0-5                       | 5        |
|           |            | 1       | 49        | 18.26                    | 17.52                  | 17.78                  | 0-5                       | 5        |
|           |            | 25      | 0         | 18.24                    | 17.55                  | 17.82                  | 0-5                       | 5        |
|           |            | 25      | 12        | 18.21                    | 17.56                  | 17.80                  | 0-5                       | 5        |
|           |            | 25      | 24        | 18.19                    | 17.57                  | 17.82                  | 0-5                       | 5        |
|           |            | 50      | 0         | 18.25                    | 17.62                  | 17.87                  | 0-5                       | 5        |

## LTE Band 66 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 132047 Ch.<br>1717.5 MHz | 132322 Ch.<br>1745 MHz | 132597 Ch.<br>1772.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 23.11                    | 22.63                  | 22.83                    | 0                         | 0        |
|           |            | 1       | 36        | 23.03                    | 22.50                  | 22.63                    | 0                         | 0        |
|           |            | 1       | 74        | 23.22                    | 22.61                  | 22.86                    | 0                         | 0        |
|           |            | 36      | 0         | 22.22                    | 21.59                  | 21.83                    | 0-1                       | 1        |
|           |            | 36      | 18        | 22.21                    | 21.60                  | 21.85                    | 0-1                       | 1        |
|           |            | 36      | 39        | 22.25                    | 21.70                  | 21.88                    | 0-1                       | 1        |
|           |            | 75      | 0         | 22.23                    | 21.65                  | 21.84                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.41                    | 21.92                  | 22.04                    | 0-1                       | 1        |
|           |            | 1       | 36        | 22.18                    | 21.80                  | 21.88                    | 0-1                       | 1        |
|           |            | 1       | 74        | 22.39                    | 21.90                  | 22.13                    | 0-1                       | 1        |
|           |            | 36      | 0         | 21.20                    | 20.63                  | 20.83                    | 0-2                       | 2        |
|           |            | 36      | 18        | 21.20                    | 20.63                  | 20.84                    | 0-2                       | 2        |
|           |            | 36      | 39        | 21.22                    | 20.63                  | 20.86                    | 0-2                       | 2        |
|           |            | 75      | 0         | 21.19                    | 20.66                  | 20.87                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.31                    | 20.81                  | 20.97                    | 0-2                       | 2        |
|           |            | 1       | 36        | 21.17                    | 20.60                  | 20.77                    | 0-2                       | 2        |
|           |            | 1       | 74        | 21.40                    | 20.83                  | 21.11                    | 0-2                       | 2        |
|           |            | 36      | 0         | 20.19                    | 19.61                  | 19.85                    | 0-3                       | 3        |
|           |            | 36      | 18        | 20.16                    | 19.62                  | 19.86                    | 0-3                       | 3        |
|           |            | 36      | 39        | 20.23                    | 19.64                  | 19.85                    | 0-3                       | 3        |
|           |            | 75      | 0         | 20.19                    | 19.65                  | 19.84                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.26                    | 17.50                  | 17.83                    | 0-5                       | 5        |
|           |            | 1       | 36        | 18.06                    | 17.53                  | 17.66                    | 0-5                       | 5        |
|           |            | 1       | 74        | 18.11                    | 17.58                  | 17.80                    | 0-5                       | 5        |
|           |            | 36      | 0         | 18.12                    | 17.57                  | 17.78                    | 0-5                       | 5        |
|           |            | 36      | 18        | 18.13                    | 17.57                  | 17.81                    | 0-5                       | 5        |
|           |            | 36      | 39        | 18.14                    | 17.59                  | 17.81                    | 0-5                       | 5        |
|           |            | 75      | 0         | 18.15                    | 17.58                  | 17.80                    | 0-5                       | 5        |

## LTE Band 66 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 132072 Ch.<br>1720 MHz   | 132322 Ch.<br>1745 MHz | 132572 Ch.<br>1770 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 23.04                    | 22.61                  | 22.85                  | 0                         | 0        |
|           |            | 1       | 49        | 23.06                    | 22.57                  | 22.75                  | 0                         | 0        |
|           |            | 1       | 99        | 23.17                    | 22.71                  | 22.87                  | 0                         | 0        |
|           |            | 50      | 0         | 22.15                    | 21.60                  | 21.78                  | 0-1                       | 1        |
|           |            | 50      | 25        | 22.14                    | 21.62                  | 21.77                  | 0-1                       | 1        |
|           |            | 50      | 49        | 22.12                    | 21.62                  | 21.85                  | 0-1                       | 1        |
|           |            | 100     | 0         | 22.07                    | 21.58                  | 21.82                  | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.32                    | 21.93                  | 22.11                  | 0-1                       | 1        |
|           |            | 1       | 49        | 22.06                    | 21.66                  | 21.95                  | 0-1                       | 1        |
|           |            | 1       | 99        | 22.34                    | 21.81                  | 22.14                  | 0-1                       | 1        |
|           |            | 50      | 0         | 21.10                    | 20.61                  | 20.82                  | 0-2                       | 2        |
|           |            | 50      | 25        | 21.16                    | 20.61                  | 20.85                  | 0-2                       | 2        |
|           |            | 50      | 49        | 21.17                    | 20.64                  | 20.83                  | 0-2                       | 2        |
|           |            | 100     | 0         | 21.08                    | 20.62                  | 20.85                  | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.23                    | 20.87                  | 21.06                  | 0-2                       | 2        |
|           |            | 1       | 49        | 21.25                    | 20.73                  | 21.03                  | 0-2                       | 2        |
|           |            | 1       | 99        | 21.39                    | 20.83                  | 21.02                  | 0-2                       | 2        |
|           |            | 50      | 0         | 20.13                    | 19.63                  | 19.86                  | 0-3                       | 3        |
|           |            | 50      | 25        | 20.12                    | 19.60                  | 19.86                  | 0-3                       | 3        |
|           |            | 50      | 49        | 20.17                    | 19.65                  | 19.83                  | 0-3                       | 3        |
|           |            | 100     | 0         | 20.10                    | 19.61                  | 19.86                  | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.25                    | 17.68                  | 17.90                  | 0-5                       | 5        |
|           |            | 1       | 49        | 18.17                    | 17.68                  | 17.81                  | 0-5                       | 5        |
|           |            | 1       | 99        | 18.28                    | 17.78                  | 17.90                  | 0-5                       | 5        |
|           |            | 50      | 0         | 18.11                    | 17.61                  | 17.81                  | 0-5                       | 5        |
|           |            | 50      | 25        | 18.12                    | 17.59                  | 17.82                  | 0-5                       | 5        |
|           |            | 50      | 49        | 18.13                    | 17.64                  | 17.84                  | 0-5                       | 5        |
|           |            | 100     | 0         | 18.11                    | 17.66                  | 17.81                  | 0-5                       | 5        |

The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

### 11.3.2 LTE Reduced Conducted Power (Hotspot activated)

LTE Band 2 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18607 Ch.<br>1850.7 MHz | 18900 Ch.<br>1880 MHz | 19193 Ch.<br>1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 18.92                   | 18.45                 | 18.96                   | 0                         | 0        |
|           |            | 1       | 3         | 18.85                   | 18.48                 | 18.99                   | 0                         | 0        |
|           |            | 1       | 5         | 18.89                   | 18.42                 | 18.96                   | 0                         | 0        |
|           |            | 3       | 0         | 18.84                   | 18.44                 | 18.92                   | 0                         | 0        |
|           |            | 3       | 1         | 19.01                   | 18.58                 | 19.08                   | 0                         | 0        |
|           |            | 3       | 3         | 18.93                   | 18.47                 | 18.99                   | 0                         | 0        |
|           |            | 6       | 0         | 18.95                   | 18.47                 | 18.97                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.12                   | 18.69                 | 19.20                   | 0-1                       | 0        |
|           |            | 1       | 3         | 19.01                   | 18.43                 | 18.93                   | 0-1                       | 0        |
|           |            | 1       | 5         | 19.06                   | 18.73                 | 19.07                   | 0-1                       | 0        |
|           |            | 3       | 0         | 19.02                   | 18.55                 | 19.07                   | 0-1                       | 0        |
|           |            | 3       | 1         | 19.14                   | 18.70                 | 19.22                   | 0-1                       | 0        |
|           |            | 3       | 3         | 19.00                   | 18.64                 | 19.09                   | 0-1                       | 0        |
|           |            | 6       | 0         | 19.05                   | 18.61                 | 19.04                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.03                   | 18.61                 | 19.14                   | 0-2                       | 0        |
|           |            | 1       | 3         | 19.06                   | 18.59                 | 19.00                   | 0-2                       | 0        |
|           |            | 1       | 5         | 19.11                   | 18.71                 | 19.15                   | 0-2                       | 0        |
|           |            | 3       | 0         | 18.98                   | 18.57                 | 18.98                   | 0-2                       | 0        |
|           |            | 3       | 1         | 19.14                   | 18.67                 | 19.21                   | 0-2                       | 0        |
|           |            | 3       | 3         | 18.96                   | 18.54                 | 18.98                   | 0-2                       | 0        |
|           |            | 6       | 0         | 18.99                   | 18.64                 | 19.07                   | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.47                   | 17.02                 | 17.59                   | 0-5                       | 1.5      |
|           |            | 1       | 3         | 17.58                   | 16.89                 | 17.56                   | 0-5                       | 1.5      |
|           |            | 1       | 5         | 17.52                   | 17.13                 | 17.64                   | 0-5                       | 1.5      |
|           |            | 3       | 0         | 17.39                   | 16.99                 | 17.43                   | 0-5                       | 1.5      |
|           |            | 3       | 1         | 17.52                   | 17.09                 | 17.55                   | 0-5                       | 1.5      |
|           |            | 3       | 3         | 17.56                   | 16.99                 | 17.46                   | 0-5                       | 1.5      |
|           |            | 6       | 0         | 17.49                   | 16.87                 | 17.51                   | 0-5                       | 1.5      |

**LTE Band 2 \_ 3 MHz Bandwidth**

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18615 Ch. 1851.5 MHz | 18900 Ch. 1880 MHz | 19185 Ch. 1908.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 18.95                | 18.53              | 19.02                | 0                         | 0        |
|           |            | 1       | 7         | 18.88                | 18.47              | 18.97                | 0                         | 0        |
|           |            | 1       | 14        | 19.00                | 18.53              | 19.03                | 0                         | 0        |
|           |            | 8       | 0         | 19.04                | 18.65              | 19.10                | 0-1                       | 0        |
|           |            | 8       | 3         | 19.08                | 18.53              | 19.07                | 0-1                       | 0        |
|           |            | 8       | 7         | 19.03                | 18.62              | 19.07                | 0-1                       | 0        |
|           |            | 15      | 0         | 19.08                | 18.62              | 19.11                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.21                | 18.83              | 19.39                | 0-1                       | 0        |
|           |            | 1       | 7         | 19.17                | 18.78              | 19.21                | 0-1                       | 0        |
|           |            | 1       | 14        | 19.14                | 18.80              | 19.27                | 0-1                       | 0        |
|           |            | 8       | 0         | 19.07                | 18.70              | 19.13                | 0-2                       | 0        |
|           |            | 8       | 3         | 19.09                | 18.62              | 19.14                | 0-2                       | 0        |
|           |            | 8       | 7         | 19.15                | 18.70              | 19.22                | 0-2                       | 0        |
|           |            | 15      | 0         | 19.06                | 18.63              | 19.14                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.18                | 18.81              | 19.30                | 0-2                       | 0        |
|           |            | 1       | 7         | 18.98                | 18.74              | 19.26                | 0-2                       | 0        |
|           |            | 1       | 14        | 19.16                | 18.70              | 19.32                | 0-2                       | 0        |
|           |            | 8       | 0         | 19.09                | 18.64              | 19.13                | 0-3                       | 0        |
|           |            | 8       | 3         | 19.03                | 18.55              | 19.13                | 0-3                       | 0        |
|           |            | 8       | 7         | 19.12                | 18.64              | 19.14                | 0-3                       | 0        |
|           |            | 15      | 0         | 19.10                | 18.66              | 19.16                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.54                | 17.13              | 17.64                | 0-5                       | 1.5      |
|           |            | 1       | 7         | 17.48                | 17.03              | 17.56                | 0-5                       | 1.5      |
|           |            | 1       | 14        | 17.62                | 17.06              | 17.59                | 0-5                       | 1.5      |
|           |            | 8       | 0         | 17.52                | 17.09              | 17.55                | 0-5                       | 1.5      |
|           |            | 8       | 3         | 17.50                | 17.01              | 17.59                | 0-5                       | 1.5      |
|           |            | 8       | 7         | 17.50                | 17.02              | 17.56                | 0-5                       | 1.5      |
|           |            | 15      | 0         | 17.52                | 17.10              | 17.58                | 0-5                       | 1.5      |

**LTE Band 2\_ 5 MHz Bandwidth**

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18625 Ch.<br>1852.5 MHz | 18900 Ch.<br>1880 MHz | 19175 Ch.<br>1907.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 19.02                   | 18.62                 | 19.15                   | 0                         | 0        |
|           |            | 1       | 12        | 19.10                   | 18.47                 | 19.01                   | 0                         | 0        |
|           |            | 1       | 24        | 19.01                   | 18.60                 | 19.09                   | 0                         | 0        |
|           |            | 12      | 0         | 19.08                   | 18.66                 | 19.13                   | 0-1                       | 0        |
|           |            | 12      | 6         | 19.11                   | 18.63                 | 19.14                   | 0-1                       | 0        |
|           |            | 12      | 11        | 19.10                   | 18.65                 | 19.15                   | 0-1                       | 0        |
|           |            | 25      | 0         | 19.08                   | 18.67                 | 19.15                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.25                   | 18.77                 | 19.41                   | 0-1                       | 0        |
|           |            | 1       | 12        | 19.22                   | 18.62                 | 19.19                   | 0-1                       | 0        |
|           |            | 1       | 24        | 19.22                   | 18.84                 | 19.30                   | 0-1                       | 0        |
|           |            | 12      | 0         | 19.16                   | 18.70                 | 19.25                   | 0-2                       | 0        |
|           |            | 12      | 6         | 19.09                   | 18.64                 | 19.22                   | 0-2                       | 0        |
|           |            | 12      | 11        | 19.04                   | 18.66                 | 19.22                   | 0-2                       | 0        |
|           |            | 25      | 0         | 19.07                   | 18.65                 | 19.21                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.25                   | 18.84                 | 19.35                   | 0-2                       | 0        |
|           |            | 1       | 12        | 19.20                   | 18.68                 | 19.14                   | 0-2                       | 0        |
|           |            | 1       | 24        | 19.19                   | 18.71                 | 19.29                   | 0-2                       | 0        |
|           |            | 12      | 0         | 19.10                   | 18.65                 | 19.20                   | 0-3                       | 0        |
|           |            | 12      | 6         | 19.10                   | 18.63                 | 19.21                   | 0-3                       | 0        |
|           |            | 12      | 11        | 19.09                   | 18.66                 | 19.24                   | 0-3                       | 0        |
|           |            | 25      | 0         | 19.09                   | 18.65                 | 19.19                   | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.64                   | 17.20                 | 17.79                   | 0-5                       | 1.5      |
|           |            | 1       | 12        | 17.51                   | 17.00                 | 17.59                   | 0-5                       | 1.5      |
|           |            | 1       | 24        | 17.72                   | 17.18                 | 17.66                   | 0-5                       | 1.5      |
|           |            | 12      | 0         | 17.60                   | 17.08                 | 17.58                   | 0-5                       | 1.5      |
|           |            | 12      | 6         | 17.53                   | 17.05                 | 17.58                   | 0-5                       | 1.5      |
|           |            | 12      | 11        | 17.54                   | 17.01                 | 17.59                   | 0-5                       | 1.5      |
|           |            | 25      | 0         | 17.61                   | 17.13                 | 17.66                   | 0-5                       | 1.5      |

## LTE Band 2 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18650 Ch.<br>1855 MHz | 18900 Ch.<br>1880 MHz | 19150 Ch.<br>1905 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 19.01                 | 18.63                 | 19.13                 | 0                         | 0        |
|           |            | 1       | 24        | 18.95                 | 18.57                 | 19.09                 | 0                         | 0        |
|           |            | 1       | 49        | 19.02                 | 18.65                 | 19.13                 | 0                         | 0        |
|           |            | 25      | 0         | 19.05                 | 18.66                 | 19.18                 | 0-1                       | 0        |
|           |            | 25      | 12        | 19.05                 | 18.63                 | 19.18                 | 0-1                       | 0        |
|           |            | 25      | 24        | 19.03                 | 18.67                 | 19.15                 | 0-1                       | 0        |
|           |            | 50      | 0         | 19.06                 | 18.58                 | 19.09                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.38                 | 18.87                 | 19.41                 | 0-1                       | 0        |
|           |            | 1       | 24        | 19.14                 | 18.75                 | 19.15                 | 0-1                       | 0        |
|           |            | 1       | 49        | 19.17                 | 18.79                 | 19.44                 | 0-1                       | 0        |
|           |            | 25      | 0         | 19.09                 | 18.69                 | 19.22                 | 0-2                       | 0        |
|           |            | 25      | 12        | 19.07                 | 18.70                 | 19.18                 | 0-2                       | 0        |
|           |            | 25      | 24        | 19.05                 | 18.68                 | 19.18                 | 0-2                       | 0        |
|           |            | 50      | 0         | 19.07                 | 18.59                 | 19.09                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.22                 | 18.95                 | 19.40                 | 0-2                       | 0        |
|           |            | 1       | 24        | 19.21                 | 18.84                 | 19.36                 | 0-2                       | 0        |
|           |            | 1       | 49        | 19.21                 | 18.82                 | 19.28                 | 0-2                       | 0        |
|           |            | 25      | 0         | 19.07                 | 18.67                 | 19.18                 | 0-3                       | 0        |
|           |            | 25      | 12        | 19.01                 | 18.67                 | 19.18                 | 0-3                       | 0        |
|           |            | 25      | 24        | 19.02                 | 18.66                 | 19.19                 | 0-3                       | 0        |
|           |            | 50      | 0         | 19.08                 | 18.67                 | 19.15                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.63                 | 17.32                 | 17.75                 | 0-5                       | 1.5      |
|           |            | 1       | 24        | 17.66                 | 17.10                 | 17.75                 | 0-5                       | 1.5      |
|           |            | 1       | 49        | 17.67                 | 17.35                 | 17.71                 | 0-5                       | 1.5      |
|           |            | 25      | 0         | 17.53                 | 17.09                 | 17.65                 | 0-5                       | 1.5      |
|           |            | 25      | 12        | 17.51                 | 17.11                 | 17.61                 | 0-5                       | 1.5      |
|           |            | 25      | 24        | 17.49                 | 17.05                 | 17.61                 | 0-5                       | 1.5      |
|           |            | 50      | 0         | 17.53                 | 17.12                 | 17.65                 | 0-5                       | 1.5      |

## LTE Band 2 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18675 Ch.<br>1857.5 MHz | 18900 Ch.<br>1880 MHz | 19125 Ch.<br>1902.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 19.01                   | 18.66                 | 19.11                   | 0                         | 0        |
|           |            | 1       | 36        | 18.93                   | 18.47                 | 18.93                   | 0                         | 0        |
|           |            | 1       | 74        | 19.05                   | 18.57                 | 19.06                   | 0                         | 0        |
|           |            | 36      | 0         | 19.06                   | 18.63                 | 19.07                   | 0-1                       | 0        |
|           |            | 36      | 18        | 19.06                   | 18.62                 | 19.07                   | 0-1                       | 0        |
|           |            | 36      | 39        | 19.08                   | 18.61                 | 19.05                   | 0-1                       | 0        |
|           |            | 75      | 0         | 19.07                   | 18.61                 | 19.03                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.25                   | 18.88                 | 19.44                   | 0-1                       | 0        |
|           |            | 1       | 36        | 19.24                   | 18.69                 | 19.20                   | 0-1                       | 0        |
|           |            | 1       | 74        | 19.23                   | 18.75                 | 19.28                   | 0-1                       | 0        |
|           |            | 36      | 0         | 19.06                   | 18.66                 | 19.10                   | 0-2                       | 0        |
|           |            | 36      | 18        | 19.08                   | 18.63                 | 19.09                   | 0-2                       | 0        |
|           |            | 36      | 39        | 19.07                   | 18.66                 | 19.09                   | 0-2                       | 0        |
|           |            | 75      | 0         | 19.05                   | 18.61                 | 19.09                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.16                   | 18.84                 | 19.26                   | 0-2                       | 0        |
|           |            | 1       | 36        | 18.94                   | 18.61                 | 19.16                   | 0-2                       | 0        |
|           |            | 1       | 74        | 19.16                   | 18.85                 | 19.26                   | 0-2                       | 0        |
|           |            | 36      | 0         | 19.05                   | 18.67                 | 19.11                   | 0-3                       | 0        |
|           |            | 36      | 18        | 19.09                   | 18.65                 | 19.09                   | 0-3                       | 0        |
|           |            | 36      | 39        | 19.07                   | 18.67                 | 19.09                   | 0-3                       | 0        |
|           |            | 75      | 0         | 19.03                   | 18.61                 | 19.09                   | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.63                   | 17.23                 | 17.73                   | 0-5                       | 1.5      |
|           |            | 1       | 36        | 17.57                   | 17.14                 | 17.59                   | 0-5                       | 1.5      |
|           |            | 1       | 74        | 17.69                   | 17.24                 | 17.63                   | 0-5                       | 1.5      |
|           |            | 36      | 0         | 17.54                   | 17.12                 | 17.56                   | 0-5                       | 1.5      |
|           |            | 36      | 18        | 17.53                   | 17.12                 | 17.58                   | 0-5                       | 1.5      |
|           |            | 36      | 39        | 17.50                   | 17.11                 | 17.54                   | 0-5                       | 1.5      |
|           |            | 75      | 0         | 17.55                   | 17.12                 | 17.60                   | 0-5                       | 1.5      |

**LTE Band 2 \_ 20 MHz Bandwidth**

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18700 Ch.<br>1860 MHz | 18900 Ch.<br>1880 MHz | 19100 Ch.<br>1900 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.00                 | 18.68                 | 19.11                 | 0                         | 0        |
|           |            | 1       | 49        | 18.94                 | 18.57                 | 19.00                 | 0                         | 0        |
|           |            | 1       | 99        | 19.00                 | 18.61                 | 19.05                 | 0                         | 0        |
|           |            | 50      | 0         | 19.01                 | 18.65                 | 19.09                 | 0-1                       | 0        |
|           |            | 50      | 25        | 18.99                 | 18.62                 | 19.04                 | 0-1                       | 0        |
|           |            | 50      | 49        | 19.03                 | 18.60                 | 19.00                 | 0-1                       | 0        |
|           |            | 100     | 0         | 19.01                 | 18.63                 | 19.04                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.22                 | 18.99                 | 19.41                 | 0-1                       | 0        |
|           |            | 1       | 49        | 19.01                 | 18.68                 | 19.11                 | 0-1                       | 0        |
|           |            | 1       | 99        | 19.15                 | 18.79                 | 19.20                 | 0-1                       | 0        |
|           |            | 50      | 0         | 18.99                 | 18.65                 | 19.05                 | 0-2                       | 0        |
|           |            | 50      | 25        | 18.98                 | 18.63                 | 19.05                 | 0-2                       | 0        |
|           |            | 50      | 49        | 19.00                 | 18.61                 | 19.02                 | 0-2                       | 0        |
|           |            | 100     | 0         | 18.99                 | 18.63                 | 19.06                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.17                 | 18.81                 | 19.23                 | 0-2                       | 0        |
|           |            | 1       | 49        | 19.28                 | 18.78                 | 19.14                 | 0-2                       | 0        |
|           |            | 1       | 99        | 19.19                 | 18.82                 | 19.17                 | 0-2                       | 0        |
|           |            | 50      | 0         | 19.04                 | 18.69                 | 19.11                 | 0-3                       | 0        |
|           |            | 50      | 25        | 19.04                 | 18.63                 | 19.05                 | 0-3                       | 0        |
|           |            | 50      | 49        | 18.99                 | 18.64                 | 19.02                 | 0-3                       | 0        |
|           |            | 100     | 0         | 19.03                 | 18.64                 | 19.01                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.54                 | 17.21                 | 17.69                 | 0-5                       | 1.5      |
|           |            | 1       | 49        | 17.56                 | 17.19                 | 17.58                 | 0-5                       | 1.5      |
|           |            | 1       | 99        | 17.60                 | 17.18                 | 17.70                 | 0-5                       | 1.5      |
|           |            | 50      | 0         | 17.50                 | 17.12                 | 17.56                 | 0-5                       | 1.5      |
|           |            | 50      | 25        | 17.47                 | 17.11                 | 17.53                 | 0-5                       | 1.5      |
|           |            | 50      | 49        | 17.48                 | 17.08                 | 17.50                 | 0-5                       | 1.5      |
|           |            | 100     | 0         | 17.48                 | 17.11                 | 17.55                 | 0-5                       | 1.5      |

[ LTE Band 4 Conducted Power ]

LTE Band 4 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19957 Ch. 1710.7 MHz | 20175 Ch. 1732.5 MHz | 20393 Ch. 1754.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.28                | 19.79                | 19.55                | 0                         | 0        |
|           |            | 1       | 3         | 20.28                | 19.83                | 19.57                | 0                         | 0        |
|           |            | 1       | 5         | 20.23                | 19.84                | 19.59                | 0                         | 0        |
|           |            | 3       | 0         | 20.22                | 19.73                | 19.57                | 0                         | 0        |
|           |            | 3       | 1         | 20.35                | 19.93                | 19.66                | 0                         | 0        |
|           |            | 3       | 3         | 20.26                | 19.83                | 19.56                | 0                         | 0        |
|           |            | 6       | 0         | 20.25                | 19.79                | 19.59                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.49                | 20.01                | 19.74                | 0-1                       | 0        |
|           |            | 1       | 3         | 20.47                | 19.85                | 19.59                | 0-1                       | 0        |
|           |            | 1       | 5         | 20.43                | 20.01                | 19.77                | 0-1                       | 0        |
|           |            | 3       | 0         | 20.32                | 19.93                | 19.63                | 0-1                       | 0        |
|           |            | 3       | 1         | 20.43                | 20.08                | 19.82                | 0-1                       | 0        |
|           |            | 3       | 3         | 20.40                | 19.93                | 19.67                | 0-1                       | 0        |
|           |            | 6       | 0         | 20.28                | 19.92                | 19.69                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.43                | 19.97                | 19.64                | 0-2                       | 0        |
|           |            | 1       | 3         | 20.40                | 19.76                | 19.63                | 0-2                       | 0        |
|           |            | 1       | 5         | 20.37                | 19.97                | 19.72                | 0-2                       | 0        |
|           |            | 3       | 0         | 20.31                | 19.92                | 19.57                | 0-2                       | 0        |
|           |            | 3       | 1         | 20.35                | 20.02                | 19.73                | 0-2                       | 0        |
|           |            | 3       | 3         | 20.24                | 19.89                | 19.63                | 0-2                       | 0        |
|           |            | 6       | 0         | 20.30                | 19.99                | 19.63                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.35                | 17.99                | 17.71                | 0-5                       | 2        |
|           |            | 1       | 3         | 18.27                | 17.95                | 17.61                | 0-5                       | 2        |
|           |            | 1       | 5         | 18.37                | 17.91                | 17.70                | 0-5                       | 2        |
|           |            | 3       | 0         | 18.26                | 17.83                | 17.52                | 0-5                       | 2        |
|           |            | 3       | 1         | 18.40                | 17.88                | 17.58                | 0-5                       | 2        |
|           |            | 3       | 3         | 18.33                | 17.87                | 17.69                | 0-5                       | 2        |
|           |            | 6       | 0         | 18.27                | 17.79                | 17.54                | 0-5                       | 2        |

## LTE Band 4 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19965 Ch. 1711.5 MHz | 20175 Ch. 1732.5 MHz | 20385 Ch. 1753.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 20.19                | 19.84                | 19.56                | 0                         | 0        |
|           |            | 1       | 7         | 20.13                | 19.77                | 19.50                | 0                         | 0        |
|           |            | 1       | 14        | 20.24                | 19.82                | 19.58                | 0                         | 0        |
|           |            | 8       | 0         | 20.34                | 19.90                | 19.64                | 0-1                       | 0        |
|           |            | 8       | 3         | 20.28                | 19.89                | 19.57                | 0-1                       | 0        |
|           |            | 8       | 7         | 20.36                | 19.95                | 19.64                | 0-1                       | 0        |
|           |            | 15      | 0         | 20.35                | 19.95                | 19.67                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.45                | 20.11                | 19.84                | 0-1                       | 0        |
|           |            | 1       | 7         | 20.49                | 19.95                | 19.79                | 0-1                       | 0        |
|           |            | 1       | 14        | 20.49                | 20.03                | 19.77                | 0-1                       | 0        |
|           |            | 8       | 0         | 20.41                | 19.98                | 19.74                | 0-2                       | 0        |
|           |            | 8       | 3         | 20.31                | 19.98                | 19.64                | 0-2                       | 0        |
|           |            | 8       | 7         | 20.38                | 20.00                | 19.73                | 0-2                       | 0        |
|           |            | 15      | 0         | 20.37                | 19.93                | 19.68                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.32                | 20.04                | 19.74                | 0-2                       | 0        |
|           |            | 1       | 7         | 20.29                | 19.96                | 19.67                | 0-2                       | 0        |
|           |            | 1       | 14        | 20.38                | 20.02                | 19.74                | 0-2                       | 0        |
|           |            | 8       | 0         | 20.35                | 19.94                | 19.70                | 0-3                       | 0        |
|           |            | 8       | 3         | 20.40                | 19.94                | 19.70                | 0-3                       | 0        |
|           |            | 8       | 7         | 20.38                | 19.92                | 19.70                | 0-3                       | 0        |
|           |            | 15      | 0         | 20.38                | 19.95                | 19.66                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.37                | 17.91                | 17.56                | 0-5                       | 2        |
|           |            | 1       | 7         | 18.28                | 17.88                | 17.58                | 0-5                       | 2        |
|           |            | 1       | 14        | 18.35                | 17.96                | 17.64                | 0-5                       | 2        |
|           |            | 8       | 0         | 18.27                | 17.84                | 17.55                | 0-5                       | 2        |
|           |            | 8       | 3         | 18.24                | 17.81                | 17.56                | 0-5                       | 2        |
|           |            | 8       | 7         | 18.28                | 17.80                | 17.55                | 0-5                       | 2        |
|           |            | 15      | 0         | 18.31                | 17.87                | 17.53                | 0-5                       | 2        |

## LTE Band 4 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19975 Ch. 1712.5 MHz | 20175 Ch. 1732.5 MHz | 20375 Ch. 1752.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.24                | 19.89                | 19.54                | 0                         | 0        |
|           |            | 1       | 12        | 20.16                | 19.78                | 19.46                | 0                         | 0        |
|           |            | 1       | 24        | 20.24                | 19.83                | 19.52                | 0                         | 0        |
|           |            | 12      | 0         | 20.30                | 19.91                | 19.57                | 0-1                       | 0        |
|           |            | 12      | 6         | 20.36                | 19.95                | 19.58                | 0-1                       | 0        |
|           |            | 12      | 11        | 20.35                | 19.95                | 19.61                | 0-1                       | 0        |
|           |            | 25      | 0         | 20.31                | 19.94                | 19.59                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.49                | 20.12                | 19.67                | 0-1                       | 0        |
|           |            | 1       | 12        | 20.46                | 19.96                | 19.71                | 0-1                       | 0        |
|           |            | 1       | 24        | 20.48                | 20.06                | 19.84                | 0-1                       | 0        |
|           |            | 12      | 0         | 20.40                | 19.97                | 19.64                | 0-2                       | 0        |
|           |            | 12      | 6         | 20.39                | 19.97                | 19.64                | 0-2                       | 0        |
|           |            | 12      | 11        | 20.31                | 19.97                | 19.65                | 0-2                       | 0        |
|           |            | 25      | 0         | 20.34                | 19.91                | 19.63                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.49                | 20.02                | 19.55                | 0-2                       | 0        |
|           |            | 1       | 12        | 20.31                | 19.92                | 19.48                | 0-2                       | 0        |
|           |            | 1       | 24        | 20.43                | 19.99                | 19.70                | 0-2                       | 0        |
|           |            | 12      | 0         | 20.32                | 19.94                | 19.57                | 0-3                       | 0        |
|           |            | 12      | 6         | 20.32                | 19.96                | 19.57                | 0-3                       | 0        |
|           |            | 12      | 11        | 20.33                | 19.97                | 19.60                | 0-3                       | 0        |
|           |            | 25      | 0         | 20.36                | 19.94                | 19.62                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.34                | 17.87                | 17.61                | 0-5                       | 2        |
|           |            | 1       | 12        | 18.13                | 17.92                | 17.52                | 0-5                       | 2        |
|           |            | 1       | 24        | 18.35                | 17.90                | 17.57                | 0-5                       | 2        |
|           |            | 12      | 0         | 18.30                | 17.87                | 17.47                | 0-5                       | 2        |
|           |            | 12      | 6         | 18.27                | 17.85                | 17.51                | 0-5                       | 2        |
|           |            | 12      | 11        | 18.31                | 17.87                | 17.49                | 0-5                       | 2        |
|           |            | 25      | 0         | 18.31                | 17.87                | 17.55                | 0-5                       | 2        |

## LTE Band 4 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                         |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-------------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 20000 Ch.<br>1715 MHz | 20175 Ch.<br>1732.5 MHz | 20350 Ch.<br>1750 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.23                 | 19.93                   | 19.56                 | 0                         | 0        |
|           |            | 1       | 24        | 20.23                 | 19.84                   | 19.54                 | 0                         | 0        |
|           |            | 1       | 49        | 20.26                 | 19.94                   | 19.64                 | 0                         | 0        |
|           |            | 25      | 0         | 20.32                 | 19.95                   | 19.64                 | 0-1                       | 0        |
|           |            | 25      | 12        | 20.29                 | 19.89                   | 19.62                 | 0-1                       | 0        |
|           |            | 25      | 24        | 20.33                 | 19.93                   | 19.64                 | 0-1                       | 0        |
|           |            | 50      | 0         | 20.27                 | 19.87                   | 19.62                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.47                 | 20.13                   | 19.89                 | 0-1                       | 0        |
|           |            | 1       | 24        | 20.40                 | 20.06                   | 19.77                 | 0-1                       | 0        |
|           |            | 1       | 49        | 20.42                 | 20.13                   | 19.80                 | 0-1                       | 0        |
|           |            | 25      | 0         | 20.33                 | 20.01                   | 19.67                 | 0-2                       | 0        |
|           |            | 25      | 12        | 20.28                 | 19.92                   | 19.71                 | 0-2                       | 0        |
|           |            | 25      | 24        | 20.27                 | 19.98                   | 19.63                 | 0-2                       | 0        |
|           |            | 50      | 0         | 20.34                 | 19.93                   | 19.63                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.47                 | 20.13                   | 19.77                 | 0-2                       | 0        |
|           |            | 1       | 24        | 20.33                 | 20.07                   | 19.74                 | 0-2                       | 0        |
|           |            | 1       | 49        | 20.49                 | 20.07                   | 19.79                 | 0-2                       | 0        |
|           |            | 25      | 0         | 20.31                 | 19.96                   | 19.62                 | 0-3                       | 0        |
|           |            | 25      | 12        | 20.31                 | 19.92                   | 19.63                 | 0-3                       | 0        |
|           |            | 25      | 24        | 20.29                 | 19.95                   | 19.65                 | 0-3                       | 0        |
|           |            | 50      | 0         | 20.33                 | 19.99                   | 19.69                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.35                 | 17.91                   | 17.61                 | 0-5                       | 2        |
|           |            | 1       | 24        | 18.33                 | 17.83                   | 17.65                 | 0-5                       | 2        |
|           |            | 1       | 49        | 18.39                 | 17.94                   | 17.72                 | 0-5                       | 2        |
|           |            | 25      | 0         | 18.28                 | 17.91                   | 17.56                 | 0-5                       | 2        |
|           |            | 25      | 12        | 18.22                 | 17.89                   | 17.56                 | 0-5                       | 2        |
|           |            | 25      | 24        | 18.29                 | 17.89                   | 17.56                 | 0-5                       | 2        |
|           |            | 50      | 0         | 18.33                 | 17.95                   | 17.64                 | 0-5                       | 2        |

**LTE Band 4 \_ 15 MHz Bandwidth**

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20025 Ch. 1717.5 MHz | 20175 Ch. 1732.5 MHz | 20325 Ch. 1747.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 20.24                | 19.94                | 19.62                | 0                         | 0        |
|           |            | 1       | 36        | 20.12                | 19.81                | 19.50                | 0                         | 0        |
|           |            | 1       | 74        | 20.29                | 19.91                | 19.66                | 0                         | 0        |
|           |            | 36      | 0         | 20.25                | 19.89                | 19.63                | 0-1                       | 0        |
|           |            | 36      | 18        | 20.32                | 19.92                | 19.63                | 0-1                       | 0        |
|           |            | 36      | 39        | 20.29                | 19.89                | 19.65                | 0-1                       | 0        |
|           |            | 75      | 0         | 20.28                | 19.90                | 19.62                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.46                | 20.06                | 19.90                | 0-1                       | 0        |
|           |            | 1       | 36        | 20.32                | 19.98                | 19.74                | 0-1                       | 0        |
|           |            | 1       | 74        | 20.44                | 20.14                | 19.99                | 0-1                       | 0        |
|           |            | 36      | 0         | 20.24                | 19.91                | 19.62                | 0-2                       | 0        |
|           |            | 36      | 18        | 20.26                | 19.95                | 19.63                | 0-2                       | 0        |
|           |            | 36      | 39        | 20.29                | 19.88                | 19.62                | 0-2                       | 0        |
|           |            | 75      | 0         | 20.26                | 19.94                | 19.63                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.42                | 19.95                | 19.77                | 0-2                       | 0        |
|           |            | 1       | 36        | 20.23                | 19.87                | 19.60                | 0-2                       | 0        |
|           |            | 1       | 74        | 20.47                | 20.11                | 19.82                | 0-2                       | 0        |
|           |            | 36      | 0         | 20.30                | 19.90                | 19.63                | 0-3                       | 0        |
|           |            | 36      | 18        | 20.29                | 19.90                | 19.66                | 0-3                       | 0        |
|           |            | 36      | 39        | 20.30                | 19.94                | 19.65                | 0-3                       | 0        |
|           |            | 75      | 0         | 20.29                | 19.92                | 19.64                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.37                | 17.93                | 17.68                | 0-5                       | 2        |
|           |            | 1       | 36        | 18.23                | 17.84                | 17.54                | 0-5                       | 2        |
|           |            | 1       | 74        | 18.47                | 18.09                | 17.71                | 0-5                       | 2        |
|           |            | 36      | 0         | 18.23                | 17.87                | 17.60                | 0-5                       | 2        |
|           |            | 36      | 18        | 18.27                | 17.91                | 17.63                | 0-5                       | 2        |
|           |            | 36      | 39        | 18.26                | 17.92                | 17.61                | 0-5                       | 2        |
|           |            | 75      | 0         | 18.24                | 17.90                | 17.62                | 0-5                       | 2        |

## LTE Band 4 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|---------------------------|----------|
|           |            |         |           | 20175 Ch.<br>1732.5 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.94                   | 0                         | 0        |
|           |            | 1       | 49        | 19.85                   | 0                         | 0        |
|           |            | 1       | 99        | 19.98                   | 0                         | 0        |
|           |            | 50      | 0         | 19.89                   | 0-1                       | 0        |
|           |            | 50      | 25        | 19.94                   | 0-1                       | 0        |
|           |            | 50      | 49        | 19.94                   | 0-1                       | 0        |
|           |            | 100     | 0         | 19.91                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.14                   | 0-1                       | 0        |
|           |            | 1       | 49        | 20.05                   | 0-1                       | 0        |
|           |            | 1       | 99        | 20.15                   | 0-1                       | 0        |
|           |            | 50      | 0         | 19.89                   | 0-2                       | 0        |
|           |            | 50      | 25        | 19.94                   | 0-2                       | 0        |
|           |            | 50      | 49        | 19.94                   | 0-2                       | 0        |
|           |            | 100     | 0         | 19.89                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.14                   | 0-2                       | 0        |
|           |            | 1       | 49        | 20.09                   | 0-2                       | 0        |
|           |            | 1       | 99        | 20.05                   | 0-2                       | 0        |
|           |            | 50      | 0         | 19.95                   | 0-3                       | 0        |
|           |            | 50      | 25        | 19.95                   | 0-3                       | 0        |
|           |            | 50      | 49        | 19.94                   | 0-3                       | 0        |
|           |            | 100     | 0         | 19.95                   | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.98                   | 0-5                       | 2        |
|           |            | 1       | 49        | 17.91                   | 0-5                       | 2        |
|           |            | 1       | 99        | 18.08                   | 0-5                       | 2        |
|           |            | 50      | 0         | 17.95                   | 0-5                       | 2        |
|           |            | 50      | 25        | 17.92                   | 0-5                       | 2        |
|           |            | 50      | 49        | 17.95                   | 0-5                       | 2        |
|           |            | 100     | 0         | 17.93                   | 0-5                       | 2        |

[ LTE Band 25 Conducted Power ]  
LTE Band 25 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26047 Ch. 1850.7 MHz | 26365 Ch. 1882.5 MHz | 26683 Ch. 1914.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 18.91                | 18.55                | 18.82                | 0                         | 0        |
|           |            | 1       | 3         | 18.98                | 18.53                | 18.87                | 0                         | 0        |
|           |            | 1       | 5         | 18.99                | 18.57                | 18.81                | 0                         | 0        |
|           |            | 3       | 0         | 18.97                | 18.48                | 18.77                | 0                         | 0        |
|           |            | 3       | 1         | 19.11                | 18.62                | 18.84                | 0                         | 0        |
|           |            | 3       | 3         | 19.02                | 18.55                | 18.90                | 0                         | 0        |
|           |            | 6       | 0         | 18.98                | 18.55                | 18.79                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.17                | 18.69                | 18.99                | 0-1                       | 0        |
|           |            | 1       | 3         | 18.89                | 18.64                | 18.69                | 0-1                       | 0        |
|           |            | 1       | 5         | 19.18                | 18.73                | 19.00                | 0-1                       | 0        |
|           |            | 3       | 0         | 19.01                | 18.60                | 18.82                | 0-1                       | 0        |
|           |            | 3       | 1         | 19.25                | 18.75                | 18.97                | 0-1                       | 0        |
|           |            | 3       | 3         | 19.12                | 18.62                | 18.99                | 0-1                       | 0        |
|           |            | 6       | 0         | 19.02                | 18.61                | 18.92                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.16                | 18.72                | 18.98                | 0-2                       | 0        |
|           |            | 1       | 3         | 19.05                | 18.58                | 18.84                | 0-2                       | 0        |
|           |            | 1       | 5         | 19.09                | 18.70                | 18.94                | 0-2                       | 0        |
|           |            | 3       | 0         | 19.00                | 18.56                | 18.85                | 0-2                       | 0        |
|           |            | 3       | 1         | 19.19                | 18.68                | 18.98                | 0-2                       | 0        |
|           |            | 3       | 3         | 19.09                | 18.59                | 18.89                | 0-2                       | 0        |
|           |            | 6       | 0         | 18.95                | 18.59                | 18.83                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.48                | 17.18                | 17.42                | 0-5                       | 1.5      |
|           |            | 1       | 3         | 17.57                | 17.18                | 17.36                | 0-5                       | 1.5      |
|           |            | 1       | 5         | 17.59                | 17.17                | 17.47                | 0-5                       | 1.5      |
|           |            | 3       | 0         | 17.57                | 17.05                | 17.37                | 0-5                       | 1.5      |
|           |            | 3       | 1         | 17.62                | 17.14                | 17.51                | 0-5                       | 1.5      |
|           |            | 3       | 3         | 17.56                | 17.18                | 17.48                | 0-5                       | 1.5      |
|           |            | 6       | 0         | 17.43                | 17.03                | 17.32                | 0-5                       | 1.5      |

## LTE Band 25 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26055 Ch. 1851.5 MHz | 26365 Ch. 1882.5 MHz | 26675 Ch. 1913.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 18.95                | 18.54                | 18.85                | 0                         | 0        |
|           |            | 1       | 7         | 18.90                | 18.45                | 18.78                | 0                         | 0        |
|           |            | 1       | 14        | 19.00                | 18.55                | 18.80                | 0                         | 0        |
|           |            | 8       | 0         | 19.04                | 18.63                | 18.93                | 0-1                       | 0        |
|           |            | 8       | 3         | 19.02                | 18.59                | 18.86                | 0-1                       | 0        |
|           |            | 8       | 7         | 19.03                | 18.62                | 18.90                | 0-1                       | 0        |
|           |            | 15      | 0         | 19.08                | 18.64                | 18.92                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.21                | 18.75                | 19.08                | 0-1                       | 0        |
|           |            | 1       | 7         | 19.20                | 18.61                | 18.94                | 0-1                       | 0        |
|           |            | 1       | 14        | 19.04                | 18.77                | 19.03                | 0-1                       | 0        |
|           |            | 8       | 0         | 19.08                | 18.67                | 18.91                | 0-2                       | 0        |
|           |            | 8       | 3         | 19.00                | 18.64                | 18.91                | 0-2                       | 0        |
|           |            | 8       | 7         | 19.10                | 18.62                | 18.90                | 0-2                       | 0        |
|           |            | 15      | 0         | 19.08                | 18.64                | 18.89                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.17                | 18.70                | 18.99                | 0-2                       | 0        |
|           |            | 1       | 7         | 18.99                | 18.67                | 18.93                | 0-2                       | 0        |
|           |            | 1       | 14        | 19.03                | 18.61                | 19.03                | 0-2                       | 0        |
|           |            | 8       | 0         | 19.04                | 18.62                | 18.93                | 0-3                       | 0        |
|           |            | 8       | 3         | 18.98                | 18.60                | 18.88                | 0-3                       | 0        |
|           |            | 8       | 7         | 19.11                | 18.62                | 18.89                | 0-3                       | 0        |
|           |            | 15      | 0         | 19.09                | 18.69                | 18.96                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.53                | 17.27                | 17.47                | 0-5                       | 1.5      |
|           |            | 1       | 7         | 17.60                | 17.22                | 17.35                | 0-5                       | 1.5      |
|           |            | 1       | 14        | 17.59                | 17.14                | 17.39                | 0-5                       | 1.5      |
|           |            | 8       | 0         | 17.48                | 17.06                | 17.35                | 0-5                       | 1.5      |
|           |            | 8       | 3         | 17.45                | 17.12                | 17.35                | 0-5                       | 1.5      |
|           |            | 8       | 7         | 17.52                | 17.07                | 17.36                | 0-5                       | 1.5      |
|           |            | 15      | 0         | 17.52                | 17.09                | 17.40                | 0-5                       | 1.5      |

## LTE Band 25 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26065 Ch. 1852.5 MHz | 26365 Ch. 1882.5 MHz | 26665 Ch. 1912.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 19.08                | 18.61                | 18.94                | 0                         | 0        |
|           |            | 1       | 12        | 18.96                | 18.47                | 18.79                | 0                         | 0        |
|           |            | 1       | 24        | 19.03                | 18.57                | 18.90                | 0                         | 0        |
|           |            | 12      | 0         | 19.11                | 18.66                | 19.00                | 0-1                       | 0        |
|           |            | 12      | 6         | 19.13                | 18.69                | 18.98                | 0-1                       | 0        |
|           |            | 12      | 11        | 19.09                | 18.69                | 18.99                | 0-1                       | 0        |
|           |            | 25      | 0         | 19.08                | 18.62                | 18.94                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.23                | 18.84                | 19.12                | 0-1                       | 0        |
|           |            | 1       | 12        | 19.15                | 18.74                | 18.98                | 0-1                       | 0        |
|           |            | 1       | 24        | 19.07                | 18.80                | 19.10                | 0-1                       | 0        |
|           |            | 12      | 0         | 19.05                | 18.63                | 19.08                | 0-2                       | 0        |
|           |            | 12      | 6         | 19.05                | 18.65                | 19.04                | 0-2                       | 0        |
|           |            | 12      | 11        | 19.05                | 18.67                | 18.99                | 0-2                       | 0        |
|           |            | 25      | 0         | 19.03                | 18.62                | 18.96                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.10                | 18.74                | 19.12                | 0-2                       | 0        |
|           |            | 1       | 12        | 19.06                | 18.55                | 19.03                | 0-2                       | 0        |
|           |            | 1       | 24        | 19.19                | 18.72                | 19.14                | 0-2                       | 0        |
|           |            | 12      | 0         | 19.08                | 18.63                | 19.00                | 0-3                       | 0        |
|           |            | 12      | 6         | 19.08                | 18.63                | 18.94                | 0-3                       | 0        |
|           |            | 12      | 11        | 19.08                | 18.64                | 18.99                | 0-3                       | 0        |
|           |            | 25      | 0         | 19.05                | 18.59                | 18.93                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.69                | 17.22                | 17.54                | 0-5                       | 1.5      |
|           |            | 1       | 12        | 17.59                | 17.09                | 17.47                | 0-5                       | 1.5      |
|           |            | 1       | 24        | 17.63                | 17.22                | 17.59                | 0-5                       | 1.5      |
|           |            | 12      | 0         | 17.55                | 17.16                | 17.43                | 0-5                       | 1.5      |
|           |            | 12      | 6         | 17.50                | 17.13                | 17.42                | 0-5                       | 1.5      |
|           |            | 12      | 11        | 17.51                | 17.12                | 17.41                | 0-5                       | 1.5      |
|           |            | 25      | 0         | 17.58                | 17.17                | 17.50                | 0-5                       | 1.5      |

## LTE Band 25 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26090 Ch. 1855 MHz  | 26365 Ch. 1882.5 MHz | 26640 Ch. 1910 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 19.04               | 18.62                | 19.08              | 0                         | 0        |
|           |            | 1       | 24        | 18.94               | 18.55                | 19.05              | 0                         | 0        |
|           |            | 1       | 49        | 19.05               | 18.64                | 19.09              | 0                         | 0        |
|           |            | 25      | 0         | 19.08               | 18.63                | 19.12              | 0-1                       | 0        |
|           |            | 25      | 12        | 19.04               | 18.62                | 19.08              | 0-1                       | 0        |
|           |            | 25      | 24        | 19.06               | 18.65                | 19.10              | 0-1                       | 0        |
|           |            | 50      | 0         | 19.06               | 18.67                | 19.16              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.32               | 18.91                | 19.27              | 0-1                       | 0        |
|           |            | 1       | 24        | 19.13               | 18.73                | 19.19              | 0-1                       | 0        |
|           |            | 1       | 49        | 19.18               | 18.69                | 19.28              | 0-1                       | 0        |
|           |            | 25      | 0         | 19.10               | 18.67                | 19.10              | 0-2                       | 0        |
|           |            | 25      | 12        | 19.04               | 18.66                | 19.09              | 0-2                       | 0        |
|           |            | 25      | 24        | 19.02               | 18.58                | 19.09              | 0-2                       | 0        |
|           |            | 50      | 0         | 19.05               | 18.64                | 19.12              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.19               | 18.75                | 19.16              | 0-2                       | 0        |
|           |            | 1       | 24        | 19.09               | 18.70                | 19.14              | 0-2                       | 0        |
|           |            | 1       | 49        | 19.26               | 18.76                | 19.10              | 0-2                       | 0        |
|           |            | 25      | 0         | 19.00               | 18.61                | 19.09              | 0-3                       | 0        |
|           |            | 25      | 12        | 19.03               | 18.60                | 19.09              | 0-3                       | 0        |
|           |            | 25      | 24        | 19.01               | 18.57                | 19.09              | 0-3                       | 0        |
|           |            | 50      | 0         | 19.07               | 18.69                | 19.10              | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.66               | 17.35                | 17.80              | 0-5                       | 1.5      |
|           |            | 1       | 24        | 17.61               | 17.29                | 17.60              | 0-5                       | 1.5      |
|           |            | 1       | 49        | 17.73               | 17.18                | 17.63              | 0-5                       | 1.5      |
|           |            | 25      | 0         | 17.53               | 17.14                | 17.59              | 0-5                       | 1.5      |
|           |            | 25      | 12        | 17.52               | 17.12                | 17.63              | 0-5                       | 1.5      |
|           |            | 25      | 24        | 17.53               | 17.13                | 17.58              | 0-5                       | 1.5      |
|           |            | 50      | 0         | 17.54               | 17.12                | 17.61              | 0-5                       | 1.5      |

## LTE Band 25 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26115 Ch. 1857.5 MHz | 26365 Ch. 1882.5 MHz | 26615 Ch. 1907.5 MHz |                           |          |
| 15        | QPSK       | 1       | 0         | 19.02                | 18.67                | 19.12                | 0                         | 0        |
|           |            | 1       | 36        | 18.90                | 18.48                | 18.95                | 0                         | 0        |
|           |            | 1       | 74        | 19.00                | 18.61                | 19.13                | 0                         | 0        |
|           |            | 36      | 0         | 19.10                | 18.67                | 19.15                | 0-1                       | 0        |
|           |            | 36      | 18        | 19.06                | 18.62                | 19.12                | 0-1                       | 0        |
|           |            | 36      | 39        | 19.07                | 18.68                | 19.09                | 0-1                       | 0        |
|           |            | 75      | 0         | 19.08                | 18.64                | 19.17                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.13                | 18.76                | 19.28                | 0-1                       | 0        |
|           |            | 1       | 36        | 19.07                | 18.64                | 19.20                | 0-1                       | 0        |
|           |            | 1       | 74        | 19.14                | 18.75                | 19.24                | 0-1                       | 0        |
|           |            | 36      | 0         | 19.06                | 18.67                | 19.14                | 0-2                       | 0        |
|           |            | 36      | 18        | 19.02                | 18.64                | 19.13                | 0-2                       | 0        |
|           |            | 36      | 39        | 19.04                | 18.65                | 19.13                | 0-2                       | 0        |
|           |            | 75      | 0         | 19.03                | 18.63                | 19.11                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.24                | 18.77                | 19.21                | 0-2                       | 0        |
|           |            | 1       | 36        | 19.01                | 18.55                | 19.12                | 0-2                       | 0        |
|           |            | 1       | 74        | 19.10                | 18.75                | 19.29                | 0-2                       | 0        |
|           |            | 36      | 0         | 19.02                | 18.66                | 19.16                | 0-3                       | 0        |
|           |            | 36      | 18        | 19.03                | 18.64                | 19.16                | 0-3                       | 0        |
|           |            | 36      | 39        | 19.05                | 18.61                | 19.15                | 0-3                       | 0        |
|           |            | 75      | 0         | 18.98                | 18.62                | 19.12                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.60                | 17.31                | 17.68                | 0-5                       | 1.5      |
|           |            | 1       | 36        | 17.56                | 16.98                | 17.57                | 0-5                       | 1.5      |
|           |            | 1       | 74        | 17.65                | 17.06                | 17.62                | 0-5                       | 1.5      |
|           |            | 36      | 0         | 17.52                | 17.15                | 17.62                | 0-5                       | 1.5      |
|           |            | 36      | 18        | 17.56                | 17.16                | 17.63                | 0-5                       | 1.5      |
|           |            | 36      | 39        | 17.53                | 17.13                | 17.61                | 0-5                       | 1.5      |
|           |            | 75      | 0         | 17.56                | 17.12                | 17.64                | 0-5                       | 1.5      |

## LTE Band 25 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26140 Ch. 1860 MHz  | 26365 Ch. 1882.5 MHz | 26590 Ch. 1905 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 18.96               | 18.67                | 19.03              | 0                         | 0        |
|           |            | 1       | 49        | 18.86               | 18.57                | 19.15              | 0                         | 0        |
|           |            | 1       | 99        | 18.97               | 18.63                | 19.10              | 0                         | 0        |
|           |            | 50      | 0         | 19.01               | 18.68                | 19.15              | 0-1                       | 0        |
|           |            | 50      | 25        | 19.00               | 18.66                | 19.11              | 0-1                       | 0        |
|           |            | 50      | 49        | 19.02               | 18.67                | 19.12              | 0-1                       | 0        |
|           |            | 100     | 0         | 19.02               | 18.66                | 19.14              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.21               | 18.86                | 19.33              | 0-1                       | 0        |
|           |            | 1       | 49        | 18.97               | 18.74                | 19.24              | 0-1                       | 0        |
|           |            | 1       | 99        | 19.14               | 18.71                | 19.37              | 0-1                       | 0        |
|           |            | 50      | 0         | 19.00               | 18.67                | 19.13              | 0-2                       | 0        |
|           |            | 50      | 25        | 18.97               | 18.64                | 19.09              | 0-2                       | 0        |
|           |            | 50      | 49        | 18.95               | 18.64                | 19.09              | 0-2                       | 0        |
|           |            | 100     | 0         | 18.99               | 18.63                | 19.12              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.13               | 18.77                | 19.24              | 0-2                       | 0        |
|           |            | 1       | 49        | 19.02               | 18.73                | 19.11              | 0-2                       | 0        |
|           |            | 1       | 99        | 18.97               | 18.76                | 19.26              | 0-2                       | 0        |
|           |            | 50      | 0         | 18.99               | 18.68                | 19.13              | 0-3                       | 0        |
|           |            | 50      | 25        | 18.97               | 18.66                | 19.15              | 0-3                       | 0        |
|           |            | 50      | 49        | 18.94               | 18.61                | 19.11              | 0-3                       | 0        |
|           |            | 100     | 0         | 18.97               | 18.64                | 19.12              | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.57               | 17.44                | 17.72              | 0-5                       | 1.5      |
|           |            | 1       | 49        | 17.45               | 17.28                | 17.66              | 0-5                       | 1.5      |
|           |            | 1       | 99        | 17.57               | 17.18                | 17.65              | 0-5                       | 1.5      |
|           |            | 50      | 0         | 17.51               | 17.15                | 17.62              | 0-5                       | 1.5      |
|           |            | 50      | 25        | 17.43               | 17.15                | 17.61              | 0-5                       | 1.5      |
|           |            | 50      | 49        | 17.47               | 17.11                | 17.64              | 0-5                       | 1.5      |
|           |            | 100     | 0         | 17.49               | 17.12                | 17.63              | 0-5                       | 1.5      |

[ LTE Band 41 Conducted Power ] - Power Class 3  
LTE Band 41 5 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                         |                         |                         |                         | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch.<br>2506.0 MHz | 40185 Ch.<br>2549.5 MHz | 40620 Ch.<br>2593.0 MHz | 41055 Ch.<br>2636.5 MHz | 41490 Ch.<br>2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 22.98                   | 22.88                   | 22.78                   | 22.67                   | 23.08                   | 0                        | 0        |
|            |            | 1       | 12        | 22.96                   | 22.88                   | 22.77                   | 22.73                   | 23.12                   | 0                        | 0        |
|            |            | 1       | 24        | 22.97                   | 22.92                   | 22.80                   | 22.74                   | 23.10                   | 0                        | 0        |
|            |            | 12      | 0         | 23.01                   | 22.94                   | 22.82                   | 22.78                   | 23.17                   | 0-1                      | 0        |
|            |            | 12      | 6         | 23.00                   | 22.95                   | 22.79                   | 22.75                   | 23.17                   | 0-1                      | 0        |
|            |            | 12      | 11        | 23.01                   | 22.96                   | 22.80                   | 22.76                   | 23.17                   | 0-1                      | 0        |
|            |            | 25      | 0         | 22.98                   | 22.95                   | 22.82                   | 22.78                   | 23.13                   | 0-1                      | 0        |
|            | 16QAM      | 1       | 0         | 22.76                   | 22.83                   | 22.76                   | 22.67                   | 23.20                   | 0-1                      | 0        |
|            |            | 1       | 12        | 22.67                   | 22.70                   | 22.65                   | 22.61                   | 23.02                   | 0-1                      | 0        |
|            |            | 1       | 24        | 22.79                   | 22.78                   | 22.68                   | 22.65                   | 23.10                   | 0-1                      | 0        |
|            |            | 12      | 0         | 22.02                   | 21.95                   | 21.83                   | 21.77                   | 22.15                   | 0-2                      | 1        |
|            |            | 12      | 6         | 22.01                   | 21.96                   | 21.79                   | 21.71                   | 22.16                   | 0-2                      | 1        |
|            |            | 12      | 11        | 22.06                   | 21.98                   | 21.80                   | 21.72                   | 22.17                   | 0-2                      | 1        |
|            |            | 25      | 0         | 21.98                   | 21.96                   | 21.81                   | 21.77                   | 22.13                   | 0-2                      | 1        |
|            | 64QAM      | 1       | 0         | 22.09                   | 22.04                   | 21.95                   | 21.80                   | 22.24                   | 0-2                      | 1        |
|            |            | 1       | 12        | 22.00                   | 21.89                   | 21.89                   | 21.64                   | 22.10                   | 0-2                      | 1        |
|            |            | 1       | 24        | 22.08                   | 21.96                   | 21.94                   | 21.67                   | 22.18                   | 0-2                      | 1        |
|            |            | 12      | 0         | 21.06                   | 20.95                   | 20.86                   | 20.75                   | 21.20                   | 0-3                      | 2        |
|            |            | 12      | 6         | 21.06                   | 20.97                   | 20.79                   | 20.74                   | 21.22                   | 0-3                      | 2        |
|            |            | 12      | 11        | 21.09                   | 20.98                   | 20.80                   | 20.75                   | 21.19                   | 0-3                      | 2        |
|            |            | 25      | 0         | 21.02                   | 20.95                   | 20.84                   | 20.77                   | 21.16                   | 0-3                      | 2        |
|            | 256QAM     | 1       | 0         | 18.94                   | 18.76                   | 18.70                   | 18.67                   | 18.98                   | 0-5                      | 3.2      |
|            |            | 1       | 12        | 18.90                   | 18.63                   | 18.61                   | 18.64                   | 18.86                   | 0-5                      | 3.2      |
|            |            | 1       | 24        | 18.91                   | 18.63                   | 18.63                   | 18.64                   | 18.90                   | 0-5                      | 3.2      |
|            |            | 12      | 0         | 19.04                   | 18.97                   | 18.85                   | 18.76                   | 19.17                   | 0-5                      | 3.2      |
|            |            | 12      | 6         | 19.03                   | 19.00                   | 18.83                   | 18.72                   | 19.19                   | 0-5                      | 3.2      |
|            |            | 12      | 11        | 19.02                   | 18.99                   | 18.83                   | 18.75                   | 19.20                   | 0-5                      | 3.2      |
|            |            | 25      | 0         | 19.04                   | 18.97                   | 18.87                   | 18.81                   | 19.18                   | 0-5                      | 3.2      |

**LTE Band 41 10 MHz Bandwidth - Power Class 3**

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 23.02                | 22.92                | 22.84                | 22.79                | 23.14                | 0                         | 0        |
|            |            | 1       | 24        | 22.88                | 22.81                | 22.70                | 22.67                | 23.01                | 0                         | 0        |
|            |            | 1       | 49        | 22.91                | 22.87                | 22.72                | 22.71                | 23.02                | 0                         | 0        |
|            |            | 25      | 0         | 22.96                | 22.94                | 22.82                | 22.80                | 23.12                | 0-1                       | 0        |
|            |            | 25      | 12        | 22.95                | 22.93                | 22.77                | 22.81                | 23.10                | 0-1                       | 0        |
|            |            | 25      | 24        | 22.94                | 22.92                | 22.76                | 22.79                | 23.11                | 0-1                       | 0        |
|            |            | 50      | 0         | 22.99                | 22.95                | 22.81                | 22.85                | 23.17                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 22.81                | 22.91                | 22.80                | 22.78                | 23.05                | 0-1                       | 0        |
|            |            | 1       | 24        | 22.73                | 22.85                | 22.67                | 22.64                | 22.94                | 0-1                       | 0        |
|            |            | 1       | 49        | 22.74                | 22.92                | 22.70                | 22.66                | 22.92                | 0-1                       | 0        |
|            |            | 25      | 0         | 22.00                | 21.94                | 21.84                | 21.80                | 22.15                | 0-2                       | 1        |
|            |            | 25      | 12        | 21.99                | 21.92                | 21.78                | 21.78                | 22.15                | 0-2                       | 1        |
|            |            | 25      | 24        | 21.98                | 21.92                | 21.77                | 21.79                | 22.14                | 0-2                       | 1        |
|            |            | 50      | 0         | 22.02                | 21.94                | 21.82                | 21.84                | 22.17                | 0-2                       | 1        |
|            | 64QAM      | 1       | 0         | 22.15                | 22.13                | 22.00                | 21.92                | 22.29                | 0-2                       | 1        |
|            |            | 1       | 24        | 22.05                | 22.05                | 21.89                | 21.88                | 22.17                | 0-2                       | 1        |
|            |            | 1       | 49        | 22.09                | 22.07                | 21.92                | 21.89                | 22.21                | 0-2                       | 1        |
|            |            | 25      | 0         | 21.02                | 20.97                | 20.84                | 20.80                | 21.16                | 0-3                       | 2        |
|            |            | 25      | 12        | 21.00                | 20.92                | 20.80                | 20.77                | 21.13                | 0-3                       | 2        |
|            |            | 25      | 24        | 20.99                | 20.95                | 20.78                | 20.76                | 21.15                | 0-3                       | 2        |
|            |            | 50      | 0         | 21.06                | 20.98                | 20.85                | 20.85                | 21.19                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 18.92                | 18.88                | 18.78                | 18.65                | 19.16                | 0-5                       | 3.2      |
|            |            | 1       | 24        | 18.83                | 18.78                | 18.66                | 18.51                | 19.04                | 0-5                       | 3.2      |
|            |            | 1       | 49        | 18.81                | 18.85                | 18.74                | 18.61                | 19.09                | 0-5                       | 3.2      |
|            |            | 25      | 0         | 19.05                | 19.00                | 18.89                | 18.85                | 19.21                | 0-5                       | 3.2      |
|            |            | 25      | 12        | 19.02                | 18.96                | 18.84                | 18.81                | 19.18                | 0-5                       | 3.2      |
|            |            | 25      | 24        | 19.03                | 18.98                | 18.85                | 18.82                | 19.19                | 0-5                       | 3.2      |
|            |            | 50      | 0         | 19.09                | 19.02                | 18.89                | 18.87                | 19.22                | 0-5                       | 3.2      |

**LTE Band 41 \_ 15 MHz Bandwidth - Power Class 3**

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 23.01                | 22.95                | 22.88                | 22.76                | 23.15                | 0                         | 0        |
|            |            | 1       | 36        | 23.00                | 22.87                | 22.77                | 22.77                | 23.09                | 0                         | 0        |
|            |            | 1       | 74        | 22.95                | 22.92                | 22.74                | 22.75                | 23.05                | 0                         | 0        |
|            |            | 36      | 0         | 23.05                | 22.99                | 22.88                | 22.86                | 23.20                | 0-1                       | 0        |
|            |            | 36      | 18        | 23.00                | 22.96                | 22.83                | 22.81                | 23.18                | 0-1                       | 0        |
|            |            | 36      | 39        | 22.99                | 22.95                | 22.80                | 22.80                | 23.14                | 0-1                       | 0        |
|            |            | 75      | 0         | 22.99                | 22.96                | 22.83                | 22.83                | 23.16                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 23.07                | 22.92                | 22.93                | 22.74                | 22.95                | 0-1                       | 0        |
|            |            | 1       | 36        | 22.95                | 22.75                | 22.73                | 22.55                | 22.83                | 0-1                       | 0        |
|            |            | 1       | 74        | 22.99                | 22.83                | 22.71                | 22.62                | 22.85                | 0-1                       | 0        |
|            |            | 36      | 0         | 22.03                | 21.96                | 21.87                | 21.82                | 22.21                | 0-2                       | 1        |
|            |            | 36      | 18        | 22.01                | 21.94                | 21.81                | 21.79                | 22.19                | 0-2                       | 1        |
|            |            | 36      | 39        | 21.98                | 21.91                | 21.80                | 21.76                | 22.16                | 0-2                       | 1        |
|            |            | 75      | 0         | 22.02                | 21.95                | 21.83                | 21.79                | 22.16                | 0-2                       | 1        |
|            | 64QAM      | 1       | 0         | 22.22                | 22.12                | 21.93                | 21.93                | 22.28                | 0-2                       | 1        |
|            |            | 1       | 36        | 22.15                | 21.86                | 21.76                | 21.78                | 22.13                | 0-2                       | 1        |
|            |            | 1       | 74        | 22.15                | 22.00                | 21.80                | 21.91                | 22.15                | 0-2                       | 1        |
|            |            | 36      | 0         | 21.07                | 20.98                | 20.90                | 20.83                | 21.22                | 0-3                       | 2        |
|            |            | 36      | 18        | 21.03                | 20.95                | 20.82                | 20.78                | 21.17                | 0-3                       | 2        |
|            |            | 36      | 39        | 21.02                | 20.93                | 20.80                | 20.77                | 21.16                | 0-3                       | 2        |
|            |            | 75      | 0         | 21.05                | 20.96                | 20.85                | 20.82                | 21.20                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 19.06                | 18.95                | 18.78                | 18.72                | 19.10                | 0-5                       | 3.2      |
|            |            | 1       | 36        | 18.97                | 18.84                | 18.64                | 18.63                | 19.02                | 0-5                       | 3.2      |
|            |            | 1       | 74        | 18.95                | 18.92                | 18.66                | 18.59                | 19.08                | 0-5                       | 3.2      |
|            |            | 36      | 0         | 19.09                | 19.01                | 18.92                | 18.85                | 19.22                | 0-5                       | 3.2      |
|            |            | 36      | 18        | 19.07                | 18.98                | 18.86                | 18.81                | 19.18                | 0-5                       | 3.2      |
|            |            | 36      | 39        | 19.06                | 18.97                | 18.83                | 18.81                | 19.17                | 0-5                       | 3.2      |
|            |            | 75      | 0         | 19.04                | 18.96                | 18.82                | 18.81                | 19.18                | 0-5                       | 3.2      |

**LTE Band 41 20 MHz Bandwidth - Power Class 3**

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 23.02                | 22.98                | 22.91                | 22.85                | 23.16                | 0                         | 0        |
|            |            | 1       | 49        | 22.87                | 22.82                | 22.70                | 22.68                | 22.96                | 0                         | 0        |
|            |            | 1       | 99        | 22.93                | 22.87                | 22.68                | 22.72                | 22.98                | 0                         | 0        |
|            |            | 50      | 0         | 23.06                | 22.98                | 22.87                | 22.88                | 23.24                | 0-1                       | 0        |
|            |            | 50      | 25        | 23.00                | 22.93                | 22.79                | 22.84                | 23.20                | 0-1                       | 0        |
|            |            | 50      | 49        | 23.00                | 22.95                | 22.78                | 22.82                | 23.20                | 0-1                       | 0        |
|            |            | 100     | 0         | 22.99                | 22.95                | 22.82                | 22.82                | 23.17                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 23.01                | 22.86                | 22.94                | 22.83                | 23.17                | 0-1                       | 0        |
|            |            | 1       | 49        | 22.82                | 22.67                | 22.75                | 22.57                | 22.98                | 0-1                       | 0        |
|            |            | 1       | 99        | 22.83                | 22.77                | 22.76                | 22.62                | 23.03                | 0-1                       | 0        |
|            |            | 50      | 0         | 22.08                | 22.01                | 21.91                | 21.89                | 22.24                | 0-2                       | 1        |
|            |            | 50      | 25        | 22.01                | 21.94                | 21.83                | 21.83                | 22.19                | 0-2                       | 1        |
|            |            | 50      | 49        | 22.01                | 21.95                | 21.79                | 21.81                | 22.22                | 0-2                       | 1        |
|            |            | 100     | 0         | 22.06                | 22.01                | 21.89                | 21.86                | 22.25                | 0-2                       | 1        |
|            | 64QAM      | 1       | 0         | 22.32                | 22.15                | 22.16                | 21.97                | 22.37                | 0-2                       | 1        |
|            |            | 1       | 49        | 22.13                | 21.99                | 21.92                | 21.74                | 22.22                | 0-2                       | 1        |
|            |            | 1       | 99        | 22.13                | 22.05                | 21.91                | 21.75                | 22.25                | 0-2                       | 1        |
|            |            | 50      | 0         | 21.11                | 21.04                | 20.93                | 20.91                | 21.28                | 0-3                       | 2        |
|            |            | 50      | 25        | 21.05                | 20.97                | 20.85                | 20.86                | 21.22                | 0-3                       | 2        |
|            |            | 50      | 49        | 21.04                | 20.98                | 20.84                | 20.84                | 21.22                | 0-3                       | 2        |
|            |            | 100     | 0         | 21.02                | 20.97                | 20.84                | 20.82                | 21.20                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 19.06                | 19.14                | 18.94                | 18.74                | 19.35                | 0-5                       | 3.2      |
|            |            | 1       | 49        | 18.88                | 18.97                | 18.74                | 18.56                | 19.16                | 0-5                       | 3.2      |
|            |            | 1       | 99        | 18.91                | 18.95                | 18.75                | 18.60                | 19.23                | 0-5                       | 3.2      |
|            |            | 50      | 0         | 19.14                | 19.07                | 18.98                | 18.94                | 19.30                | 0-5                       | 3.2      |
|            |            | 50      | 25        | 19.09                | 19.01                | 18.90                | 18.90                | 19.26                | 0-5                       | 3.2      |
|            |            | 50      | 49        | 19.07                | 19.02                | 18.87                | 18.87                | 19.24                | 0-5                       | 3.2      |
|            |            | 100     | 0         | 19.03                | 18.95                | 18.85                | 18.83                | 19.20                | 0-5                       | 3.2      |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[ LTE Band 41 Conducted Power ] - Power Class 2  
LTE Band 41 5 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 23.12                | 22.95                | 22.84                | 22.74                | 23.16                | 0                        | 0        |
|            |            | 1       | 12        | 23.12                | 22.94                | 22.77                | 22.70                | 23.14                | 0                        | 0        |
|            |            | 1       | 24        | 23.08                | 22.94                | 22.82                | 22.77                | 23.14                | 0                        | 0        |
|            |            | 12      | 0         | 23.05                | 22.93                | 22.83                | 22.78                | 23.12                | 0-1                      | 0        |
|            |            | 12      | 6         | 23.04                | 22.91                | 22.84                | 22.79                | 23.10                | 0-1                      | 0        |
|            |            | 12      | 11        | 23.04                | 22.93                | 22.80                | 22.78                | 23.11                | 0-1                      | 0        |
|            |            | 25      | 0         | 23.05                | 22.92                | 22.81                | 22.77                | 23.14                | 0-1                      | 0        |
|            | 16QAM      | 1       | 0         | 23.11                | 23.05                | 23.14                | 22.96                | 23.38                | 0-1                      | 0        |
|            |            | 1       | 12        | 22.89                | 23.06                | 23.01                | 22.85                | 23.37                | 0-1                      | 0        |
|            |            | 1       | 24        | 23.10                | 23.05                | 23.14                | 22.96                | 23.37                | 0-1                      | 0        |
|            |            | 12      | 0         | 22.12                | 21.93                | 21.93                | 21.78                | 22.16                | 0-2                      | 0        |
|            |            | 12      | 6         | 22.09                | 21.89                | 21.81                | 21.77                | 22.15                | 0-2                      | 0        |
|            |            | 12      | 11        | 22.10                | 21.88                | 21.82                | 21.74                | 22.17                | 0-2                      | 0        |
|            |            | 25      | 0         | 22.10                | 21.93                | 21.75                | 21.78                | 22.17                | 0-2                      | 0        |
|            | 64QAM      | 1       | 0         | 22.53                | 22.37                | 22.16                | 21.98                | 22.49                | 0-2                      | 0        |
|            |            | 1       | 12        | 22.53                | 22.18                | 22.07                | 22.01                | 22.46                | 0-2                      | 0        |
|            |            | 1       | 24        | 22.53                | 22.39                | 22.19                | 22.04                | 22.51                | 0-2                      | 0        |
|            |            | 12      | 0         | 21.09                | 20.81                | 20.84                | 20.79                | 21.21                | 0-3                      | 2        |
|            |            | 12      | 6         | 21.07                | 20.79                | 20.85                | 20.80                | 21.17                | 0-3                      | 2        |
|            |            | 12      | 11        | 21.05                | 20.81                | 20.82                | 20.81                | 21.17                | 0-3                      | 2        |
|            |            | 25      | 0         | 21.07                | 20.90                | 20.83                | 20.71                | 21.09                | 0-3                      | 2        |
|            | 256QAM     | 1       | 0         | 18.64                | 18.69                | 18.93                | 18.35                | 18.93                | 0-5                      | 2.7      |
|            |            | 1       | 12        | 18.61                | 18.70                | 18.86                | 18.27                | 18.92                | 0-5                      | 2.7      |
|            |            | 1       | 24        | 18.64                | 18.66                | 18.86                | 18.42                | 18.94                | 0-5                      | 2.7      |
|            |            | 12      | 0         | 19.10                | 18.94                | 18.90                | 18.85                | 19.10                | 0-5                      | 2.7      |
|            |            | 12      | 6         | 19.08                | 18.89                | 18.90                | 18.82                | 19.08                | 0-5                      | 2.7      |
|            |            | 12      | 11        | 19.08                | 18.92                | 18.85                | 18.79                | 19.11                | 0-5                      | 2.7      |
|            |            | 25      | 0         | 19.08                | 18.98                | 18.84                | 18.81                | 19.16                | 0-5                      | 2.7      |

## LTE Band 41 10 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 22.98                | 22.94                | 22.82                | 22.83                | 23.18                | 0                         | 0        |
|            |            | 1       | 24        | 22.90                | 22.90                | 22.77                | 22.81                | 23.13                | 0                         | 0        |
|            |            | 1       | 49        | 22.96                | 22.88                | 22.76                | 22.80                | 23.12                | 0                         | 0        |
|            |            | 25      | 0         | 22.95                | 22.88                | 22.77                | 22.81                | 23.14                | 0-1                       | 0        |
|            |            | 25      | 12        | 22.93                | 22.85                | 22.73                | 22.79                | 23.12                | 0-1                       | 0        |
|            |            | 25      | 24        | 22.91                | 22.84                | 22.71                | 22.76                | 23.11                | 0-1                       | 0        |
|            |            | 50      | 0         | 22.89                | 22.84                | 22.70                | 22.77                | 23.07                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 23.01                | 23.24                | 23.26                | 22.86                | 23.37                | 0-1                       | 0        |
|            |            | 1       | 24        | 22.76                | 23.35                | 23.03                | 22.71                | 23.38                | 0-1                       | 0        |
|            |            | 1       | 49        | 22.94                | 23.34                | 23.06                | 22.77                | 23.37                | 0-1                       | 0        |
|            |            | 25      | 0         | 21.99                | 21.93                | 21.76                | 21.83                | 22.13                | 0-2                       | 0        |
|            |            | 25      | 12        | 21.94                | 21.91                | 21.73                | 21.81                | 22.12                | 0-2                       | 0        |
|            |            | 25      | 24        | 21.94                | 21.89                | 21.70                | 21.78                | 22.11                | 0-2                       | 0        |
|            |            | 50      | 0         | 21.91                | 21.88                | 21.72                | 21.78                | 22.14                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 22.54                | 22.41                | 22.18                | 22.31                | 22.54                | 0-2                       | 0        |
|            |            | 1       | 24        | 22.48                | 22.33                | 22.13                | 22.28                | 22.52                | 0-2                       | 0        |
|            |            | 1       | 49        | 22.43                | 22.32                | 22.08                | 22.21                | 22.49                | 0-2                       | 0        |
|            |            | 25      | 0         | 20.98                | 20.89                | 20.79                | 20.80                | 21.17                | 0-3                       | 2        |
|            |            | 25      | 12        | 20.97                | 20.88                | 20.76                | 20.79                | 21.15                | 0-3                       | 2        |
|            |            | 25      | 24        | 20.96                | 20.87                | 20.75                | 20.76                | 21.15                | 0-3                       | 2        |
|            |            | 50      | 0         | 20.97                | 20.90                | 20.79                | 20.80                | 21.17                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 18.93                | 18.74                | 18.91                | 18.42                | 19.24                | 0-5                       | 2.7      |
|            |            | 1       | 24        | 18.87                | 18.64                | 18.88                | 18.34                | 19.23                | 0-5                       | 2.7      |
|            |            | 1       | 49        | 18.85                | 18.70                | 18.88                | 18.35                | 19.25                | 0-5                       | 2.7      |
|            |            | 25      | 0         | 19.01                | 18.93                | 18.84                | 18.83                | 19.17                | 0-5                       | 2.7      |
|            |            | 25      | 12        | 18.99                | 18.93                | 18.81                | 18.82                | 19.17                | 0-5                       | 2.7      |
|            |            | 25      | 24        | 18.98                | 18.91                | 18.79                | 18.79                | 19.16                | 0-5                       | 2.7      |
|            |            | 50      | 0         | 19.01                | 18.93                | 18.82                | 18.84                | 19.19                | 0-5                       | 2.7      |

## LTE Band 41 \_ 15 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 23.05                | 22.97                | 22.87                | 22.83                | 23.17                | 0                         | 0        |
|            |            | 1       | 36        | 22.97                | 22.86                | 22.76                | 22.69                | 23.10                | 0                         | 0        |
|            |            | 1       | 74        | 23.00                | 22.93                | 22.77                | 22.77                | 23.10                | 0                         | 0        |
|            |            | 36      | 0         | 22.98                | 22.91                | 22.80                | 22.79                | 23.12                | 0-1                       | 0        |
|            |            | 36      | 18        | 22.95                | 22.88                | 22.75                | 22.78                | 23.09                | 0-1                       | 0        |
|            |            | 36      | 39        | 22.92                | 22.86                | 22.72                | 22.73                | 23.07                | 0-1                       | 0        |
|            |            | 75      | 0         | 22.94                | 22.88                | 22.76                | 22.76                | 23.11                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 23.18                | 23.07                | 23.20                | 23.03                | 23.38                | 0-1                       | 0        |
|            |            | 1       | 36        | 22.87                | 22.95                | 23.09                | 22.82                | 23.37                | 0-1                       | 0        |
|            |            | 1       | 74        | 23.08                | 22.99                | 23.08                | 22.91                | 23.32                | 0-1                       | 0        |
|            |            | 36      | 0         | 22.00                | 21.90                | 21.81                | 21.76                | 22.11                | 0-2                       | 0        |
|            |            | 36      | 18        | 21.99                | 21.87                | 21.74                | 21.76                | 22.08                | 0-2                       | 0        |
|            |            | 36      | 39        | 21.94                | 21.86                | 21.73                | 21.72                | 22.06                | 0-2                       | 0        |
|            |            | 75      | 0         | 21.95                | 21.89                | 21.82                | 21.75                | 22.13                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 22.13                | 22.28                | 22.22                | 22.12                | 22.49                | 0-2                       | 0        |
|            |            | 1       | 36        | 22.01                | 22.01                | 21.94                | 21.99                | 22.36                | 0-2                       | 0        |
|            |            | 1       | 74        | 22.05                | 22.24                | 22.11                | 22.03                | 22.42                | 0-2                       | 0        |
|            |            | 36      | 0         | 21.01                | 20.94                | 20.83                | 20.75                | 21.17                | 0-3                       | 2        |
|            |            | 36      | 18        | 21.00                | 20.93                | 20.74                | 20.75                | 21.15                | 0-3                       | 2        |
|            |            | 36      | 39        | 20.96                | 20.90                | 20.70                | 20.70                | 21.13                | 0-3                       | 2        |
|            |            | 75      | 0         | 21.00                | 20.90                | 20.77                | 20.75                | 21.16                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 18.84                | 18.74                | 18.91                | 18.50                | 18.76                | 0-5                       | 2.7      |
|            |            | 1       | 36        | 18.67                | 18.60                | 18.68                | 18.29                | 19.01                | 0-5                       | 2.7      |
|            |            | 1       | 74        | 18.74                | 18.69                | 18.81                | 18.43                | 19.01                | 0-5                       | 2.7      |
|            |            | 36      | 0         | 19.01                | 18.97                | 18.82                | 18.81                | 19.15                | 0-5                       | 2.7      |
|            |            | 36      | 18        | 18.99                | 18.96                | 18.81                | 18.81                | 19.13                | 0-5                       | 2.7      |
|            |            | 36      | 39        | 18.97                | 18.95                | 18.79                | 18.76                | 19.12                | 0-5                       | 2.7      |
|            |            | 75      | 0         | 18.98                | 18.92                | 18.81                | 18.77                | 19.15                | 0-5                       | 2.7      |

## LTE Band 41 20 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 23.10                | 23.05                | 22.96                | 22.98                | 23.26                | 0                         | 0        |
|            |            | 1       | 49        | 22.98                | 22.93                | 22.77                | 22.83                | 23.11                | 0                         | 0        |
|            |            | 1       | 99        | 23.00                | 22.93                | 22.75                | 22.81                | 23.09                | 0                         | 0        |
|            |            | 50      | 0         | 22.96                | 22.90                | 22.78                | 22.83                | 23.12                | 0-1                       | 0        |
|            |            | 50      | 25        | 22.90                | 22.84                | 22.71                | 22.76                | 23.06                | 0-1                       | 0        |
|            |            | 50      | 49        | 22.89                | 22.84                | 22.67                | 22.73                | 23.04                | 0-1                       | 0        |
|            |            | 100     | 0         | 22.94                | 22.90                | 22.76                | 22.81                | 23.11                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 22.91                | 23.36                | 23.29                | 22.97                | 23.37                | 0-1                       | 0        |
|            |            | 1       | 49        | 22.65                | 23.35                | 23.09                | 22.70                | 23.39                | 0-1                       | 0        |
|            |            | 1       | 99        | 22.73                | 23.34                | 23.09                | 22.80                | 23.39                | 0-1                       | 0        |
|            |            | 50      | 0         | 21.97                | 21.92                | 21.83                | 21.83                | 22.13                | 0-2                       | 0        |
|            |            | 50      | 25        | 21.95                | 21.87                | 21.73                | 21.76                | 22.07                | 0-2                       | 0        |
|            |            | 50      | 49        | 21.94                | 21.88                | 21.68                | 21.74                | 22.05                | 0-2                       | 0        |
|            |            | 100     | 0         | 22.01                | 21.95                | 21.83                | 21.84                | 22.18                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 22.49                | 22.55                | 22.35                | 22.21                | 22.62                | 0-2                       | 0        |
|            |            | 1       | 49        | 22.34                | 22.41                | 22.19                | 22.32                | 22.51                | 0-2                       | 0        |
|            |            | 1       | 99        | 22.32                | 22.45                | 22.15                | 22.27                | 22.47                | 0-2                       | 0        |
|            |            | 50      | 0         | 20.99                | 20.96                | 20.87                | 20.85                | 21.21                | 0-3                       | 2        |
|            |            | 50      | 25        | 20.95                | 20.92                | 20.81                | 20.78                | 21.16                | 0-3                       | 2        |
|            |            | 50      | 49        | 20.92                | 20.90                | 20.76                | 20.75                | 21.11                | 0-3                       | 2        |
|            |            | 100     | 0         | 20.98                | 20.92                | 20.79                | 20.80                | 21.16                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 18.97                | 18.88                | 19.09                | 18.59                | 19.37                | 0-5                       | 2.7      |
|            |            | 1       | 49        | 18.84                | 18.74                | 18.95                | 18.41                | 19.27                | 0-5                       | 2.7      |
|            |            | 1       | 99        | 18.83                | 18.80                | 18.93                | 18.44                | 19.30                | 0-5                       | 2.7      |
|            |            | 50      | 0         | 19.09                | 19.02                | 18.90                | 18.88                | 19.22                | 0-5                       | 2.7      |
|            |            | 50      | 25        | 19.04                | 18.96                | 18.85                | 18.83                | 19.19                | 0-5                       | 2.7      |
|            |            | 50      | 49        | 19.01                | 18.95                | 18.79                | 18.81                | 19.17                | 0-5                       | 2.7      |
|            |            | 100     | 0         | 18.98                | 18.90                | 18.79                | 18.81                | 19.15                | 0-5                       | 2.7      |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]      |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 131979 Ch.<br>1710.7 MHz | 132322 Ch.<br>1745 MHz | 132665 Ch.<br>1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.21                    | 19.54                  | 19.80                    | 0                         | 0        |
|           |            | 1       | 3         | 20.20                    | 19.50                  | 19.86                    | 0                         | 0        |
|           |            | 1       | 5         | 20.16                    | 19.53                  | 19.82                    | 0                         | 0        |
|           |            | 3       | 0         | 20.18                    | 19.46                  | 19.81                    | 0                         | 0        |
|           |            | 3       | 1         | 20.33                    | 19.66                  | 19.93                    | 0                         | 0        |
|           |            | 3       | 3         | 20.19                    | 19.54                  | 19.83                    | 0                         | 0        |
|           |            | 6       | 0         | 20.19                    | 19.50                  | 19.87                    | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.36                    | 19.59                  | 20.13                    | 0-1                       | 0        |
|           |            | 1       | 3         | 20.10                    | 19.55                  | 20.02                    | 0-1                       | 0        |
|           |            | 1       | 5         | 20.36                    | 19.68                  | 20.12                    | 0-1                       | 0        |
|           |            | 3       | 0         | 20.22                    | 19.59                  | 19.93                    | 0-1                       | 0        |
|           |            | 3       | 1         | 20.36                    | 19.63                  | 20.11                    | 0-1                       | 0        |
|           |            | 3       | 3         | 20.33                    | 19.65                  | 20.08                    | 0-1                       | 0        |
|           |            | 6       | 0         | 20.30                    | 19.59                  | 19.99                    | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.35                    | 19.69                  | 20.06                    | 0-2                       | 0        |
|           |            | 1       | 3         | 20.31                    | 19.49                  | 20.01                    | 0-2                       | 0        |
|           |            | 1       | 5         | 20.32                    | 19.73                  | 19.98                    | 0-2                       | 0        |
|           |            | 3       | 0         | 20.23                    | 19.51                  | 19.89                    | 0-2                       | 0        |
|           |            | 3       | 1         | 20.41                    | 19.65                  | 20.02                    | 0-2                       | 0        |
|           |            | 3       | 3         | 20.28                    | 19.52                  | 19.91                    | 0-2                       | 0        |
|           |            | 6       | 0         | 20.27                    | 19.62                  | 20.02                    | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.37                    | 17.64                  | 17.93                    | 0-5                       | 1.8      |
|           |            | 1       | 3         | 18.16                    | 17.49                  | 17.87                    | 0-5                       | 1.8      |
|           |            | 1       | 5         | 18.34                    | 17.58                  | 17.96                    | 0-5                       | 1.8      |
|           |            | 3       | 0         | 18.21                    | 17.50                  | 17.83                    | 0-5                       | 1.8      |
|           |            | 3       | 1         | 18.34                    | 17.50                  | 17.80                    | 0-5                       | 1.8      |
|           |            | 3       | 3         | 18.30                    | 17.59                  | 17.95                    | 0-5                       | 1.8      |
|           |            | 6       | 0         | 18.19                    | 17.51                  | 17.79                    | 0-5                       | 1.8      |

## LTE Band 66 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131987 Ch. 1711.5 MHz | 132322 Ch. 1745 MHz | 132657 Ch. 1778.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 20.15                 | 19.48               | 19.80                 | 0                         | 0        |
|           |            | 1       | 7         | 20.10                 | 19.44               | 19.75                 | 0                         | 0        |
|           |            | 1       | 14        | 20.20                 | 19.51               | 19.83                 | 0                         | 0        |
|           |            | 8       | 0         | 20.28                 | 19.59               | 19.89                 | 0-1                       | 0        |
|           |            | 8       | 3         | 20.25                 | 19.57               | 19.89                 | 0-1                       | 0        |
|           |            | 8       | 7         | 20.25                 | 19.61               | 19.91                 | 0-1                       | 0        |
|           |            | 15      | 0         | 20.31                 | 19.62               | 19.92                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.43                 | 19.71               | 20.10                 | 0-1                       | 0        |
|           |            | 1       | 7         | 20.36                 | 19.70               | 19.97                 | 0-1                       | 0        |
|           |            | 1       | 14        | 20.35                 | 19.67               | 20.10                 | 0-1                       | 0        |
|           |            | 8       | 0         | 20.30                 | 19.67               | 20.04                 | 0-2                       | 0        |
|           |            | 8       | 3         | 20.30                 | 19.60               | 20.01                 | 0-2                       | 0        |
|           |            | 8       | 7         | 20.31                 | 19.66               | 20.02                 | 0-2                       | 0        |
|           |            | 15      | 0         | 20.28                 | 19.62               | 19.99                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.39                 | 19.74               | 20.03                 | 0-2                       | 0        |
|           |            | 1       | 7         | 20.36                 | 19.64               | 20.08                 | 0-2                       | 0        |
|           |            | 1       | 14        | 20.34                 | 19.53               | 20.08                 | 0-2                       | 0        |
|           |            | 8       | 0         | 20.28                 | 19.64               | 19.99                 | 0-3                       | 0        |
|           |            | 8       | 3         | 20.31                 | 19.62               | 19.92                 | 0-3                       | 0        |
|           |            | 8       | 7         | 20.29                 | 19.64               | 20.04                 | 0-3                       | 0        |
|           |            | 15      | 0         | 20.31                 | 19.64               | 20.02                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.31                 | 17.73               | 17.88                 | 0-5                       | 1.8      |
|           |            | 1       | 7         | 18.36                 | 17.53               | 17.78                 | 0-5                       | 1.8      |
|           |            | 1       | 14        | 18.27                 | 17.68               | 17.93                 | 0-5                       | 1.8      |
|           |            | 8       | 0         | 18.24                 | 17.54               | 17.85                 | 0-5                       | 1.8      |
|           |            | 8       | 3         | 18.21                 | 17.55               | 17.83                 | 0-5                       | 1.8      |
|           |            | 8       | 7         | 18.23                 | 17.52               | 17.83                 | 0-5                       | 1.8      |
|           |            | 15      | 0         | 18.25                 | 17.54               | 17.87                 | 0-5                       | 1.8      |

## LTE Band 66 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                    |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|--------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131997 Ch. 1712.5 MHz | 132322Ch. 1745 MHz | 132647 Ch. 1777.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.08                 | 19.46              | 19.72                 | 0                         | 0        |
|           |            | 1       | 12        | 19.98                 | 19.30              | 19.59                 | 0                         | 0        |
|           |            | 1       | 24        | 20.03                 | 19.42              | 19.67                 | 0                         | 0        |
|           |            | 12      | 0         | 20.14                 | 19.45              | 19.78                 | 0-1                       | 0        |
|           |            | 12      | 6         | 20.11                 | 19.51              | 19.76                 | 0-1                       | 0        |
|           |            | 12      | 11        | 20.13                 | 19.55              | 19.80                 | 0-1                       | 0        |
|           |            | 25      | 0         | 20.14                 | 19.47              | 19.76                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.28                 | 19.59              | 19.87                 | 0-1                       | 0        |
|           |            | 1       | 12        | 20.15                 | 19.52              | 19.89                 | 0-1                       | 0        |
|           |            | 1       | 24        | 20.22                 | 19.62              | 19.92                 | 0-1                       | 0        |
|           |            | 12      | 0         | 20.09                 | 19.50              | 19.79                 | 0-2                       | 0        |
|           |            | 12      | 6         | 20.15                 | 19.51              | 19.83                 | 0-2                       | 0        |
|           |            | 12      | 11        | 20.13                 | 19.51              | 19.79                 | 0-2                       | 0        |
|           |            | 25      | 0         | 20.14                 | 19.47              | 19.88                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.16                 | 19.46              | 19.85                 | 0-2                       | 0        |
|           |            | 1       | 12        | 20.06                 | 19.33              | 19.81                 | 0-2                       | 0        |
|           |            | 1       | 24        | 20.12                 | 19.56              | 19.99                 | 0-2                       | 0        |
|           |            | 12      | 0         | 20.15                 | 19.50              | 19.80                 | 0-3                       | 0        |
|           |            | 12      | 6         | 20.13                 | 19.47              | 19.77                 | 0-3                       | 0        |
|           |            | 12      | 11        | 20.14                 | 19.50              | 19.83                 | 0-3                       | 0        |
|           |            | 25      | 0         | 20.09                 | 19.46              | 19.79                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.12                 | 17.54              | 17.80                 | 0-5                       | 1.8      |
|           |            | 1       | 12        | 18.09                 | 17.18              | 17.63                 | 0-5                       | 1.8      |
|           |            | 1       | 24        | 18.15                 | 17.59              | 17.64                 | 0-5                       | 1.8      |
|           |            | 12      | 0         | 18.08                 | 17.44              | 17.70                 | 0-5                       | 1.8      |
|           |            | 12      | 6         | 18.02                 | 17.45              | 17.70                 | 0-5                       | 1.8      |
|           |            | 12      | 11        | 18.06                 | 17.44              | 17.71                 | 0-5                       | 1.8      |
|           |            | 25      | 0         | 18.11                 | 17.49              | 17.77                 | 0-5                       | 1.8      |

## LTE Band 66 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]    |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 132022 Ch.<br>1715 MHz | 132322 Ch.<br>1745 MHz | 132622 Ch.<br>1775 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.10                  | 19.40                  | 19.70                  | 0                         | 0        |
|           |            | 1       | 24        | 20.05                  | 19.42                  | 19.70                  | 0                         | 0        |
|           |            | 1       | 49        | 20.13                  | 19.51                  | 19.75                  | 0                         | 0        |
|           |            | 25      | 0         | 20.15                  | 19.49                  | 19.73                  | 0-1                       | 0        |
|           |            | 25      | 12        | 20.12                  | 19.48                  | 19.76                  | 0-1                       | 0        |
|           |            | 25      | 24        | 20.13                  | 19.51                  | 19.75                  | 0-1                       | 0        |
|           |            | 50      | 0         | 20.15                  | 19.55                  | 19.70                  | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.39                  | 19.54                  | 19.83                  | 0-1                       | 0        |
|           |            | 1       | 24        | 20.21                  | 19.61                  | 19.99                  | 0-1                       | 0        |
|           |            | 1       | 49        | 20.25                  | 19.66                  | 20.02                  | 0-1                       | 0        |
|           |            | 25      | 0         | 20.16                  | 19.53                  | 19.79                  | 0-2                       | 0        |
|           |            | 25      | 12        | 20.12                  | 19.43                  | 19.81                  | 0-2                       | 0        |
|           |            | 25      | 24        | 20.12                  | 19.50                  | 19.86                  | 0-2                       | 0        |
|           |            | 50      | 0         | 20.14                  | 19.45                  | 19.76                  | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.26                  | 19.67                  | 19.86                  | 0-2                       | 0        |
|           |            | 1       | 24        | 20.18                  | 19.52                  | 19.92                  | 0-2                       | 0        |
|           |            | 1       | 49        | 20.15                  | 19.44                  | 19.94                  | 0-2                       | 0        |
|           |            | 25      | 0         | 20.13                  | 19.50                  | 19.76                  | 0-3                       | 0        |
|           |            | 25      | 12        | 20.09                  | 19.47                  | 19.80                  | 0-3                       | 0        |
|           |            | 25      | 24        | 20.04                  | 19.50                  | 19.79                  | 0-3                       | 0        |
|           |            | 50      | 0         | 20.18                  | 19.52                  | 19.81                  | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.14                  | 17.57                  | 17.67                  | 0-5                       | 1.8      |
|           |            | 1       | 24        | 17.97                  | 17.53                  | 17.66                  | 0-5                       | 1.8      |
|           |            | 1       | 49        | 18.19                  | 17.47                  | 17.76                  | 0-5                       | 1.8      |
|           |            | 25      | 0         | 18.11                  | 17.47                  | 17.72                  | 0-5                       | 1.8      |
|           |            | 25      | 12        | 18.08                  | 17.41                  | 17.68                  | 0-5                       | 1.8      |
|           |            | 25      | 24        | 18.09                  | 17.43                  | 17.67                  | 0-5                       | 1.8      |
|           |            | 50      | 0         | 18.13                  | 17.51                  | 17.75                  | 0-5                       | 1.8      |

## LTE Band 66 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]      |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 132047 Ch.<br>1717.5 MHz | 132322 Ch.<br>1745 MHz | 132597 Ch.<br>1772.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 20.10                    | 19.56                  | 19.72                    | 0                         | 0        |
|           |            | 1       | 36        | 20.09                    | 19.34                  | 19.51                    | 0                         | 0        |
|           |            | 1       | 74        | 20.07                    | 19.55                  | 19.73                    | 0                         | 0        |
|           |            | 36      | 0         | 20.04                    | 19.51                  | 19.71                    | 0-1                       | 0        |
|           |            | 36      | 18        | 20.04                    | 19.50                  | 19.72                    | 0-1                       | 0        |
|           |            | 36      | 39        | 20.06                    | 19.50                  | 19.65                    | 0-1                       | 0        |
|           |            | 75      | 0         | 20.05                    | 19.50                  | 19.65                    | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.26                    | 19.70                  | 19.91                    | 0-1                       | 0        |
|           |            | 1       | 36        | 20.13                    | 19.64                  | 19.77                    | 0-1                       | 0        |
|           |            | 1       | 74        | 20.27                    | 19.79                  | 19.99                    | 0-1                       | 0        |
|           |            | 36      | 0         | 20.03                    | 19.50                  | 19.72                    | 0-2                       | 0        |
|           |            | 36      | 18        | 20.05                    | 19.46                  | 19.72                    | 0-2                       | 0        |
|           |            | 36      | 39        | 20.06                    | 19.54                  | 19.76                    | 0-2                       | 0        |
|           |            | 75      | 0         | 20.08                    | 19.54                  | 19.72                    | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.10                    | 19.61                  | 19.88                    | 0-2                       | 0        |
|           |            | 1       | 36        | 20.02                    | 19.47                  | 19.76                    | 0-2                       | 0        |
|           |            | 1       | 74        | 20.33                    | 19.73                  | 20.01                    | 0-2                       | 0        |
|           |            | 36      | 0         | 20.04                    | 19.48                  | 19.73                    | 0-3                       | 0        |
|           |            | 36      | 18        | 20.07                    | 19.51                  | 19.74                    | 0-3                       | 0        |
|           |            | 36      | 39        | 20.12                    | 19.58                  | 19.75                    | 0-3                       | 0        |
|           |            | 75      | 0         | 20.06                    | 19.51                  | 19.69                    | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.20                    | 17.55                  | 17.70                    | 0-5                       | 1.8      |
|           |            | 1       | 36        | 18.10                    | 17.48                  | 17.67                    | 0-5                       | 1.8      |
|           |            | 1       | 74        | 18.16                    | 17.49                  | 17.64                    | 0-5                       | 1.8      |
|           |            | 36      | 0         | 18.01                    | 17.45                  | 17.65                    | 0-5                       | 1.8      |
|           |            | 36      | 18        | 18.01                    | 17.47                  | 17.67                    | 0-5                       | 1.8      |
|           |            | 36      | 39        | 18.01                    | 17.48                  | 17.67                    | 0-5                       | 1.8      |
|           |            | 75      | 0         | 18.05                    | 17.50                  | 17.67                    | 0-5                       | 1.8      |

## LTE Band 66 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]    |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 132072 Ch.<br>1720 MHz | 132322 Ch.<br>1745 MHz | 132572 Ch.<br>1770 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.91                  | 19.50                  | 19.66                  | 0                         | 0        |
|           |            | 1       | 49        | 19.91                  | 19.44                  | 19.62                  | 0                         | 0        |
|           |            | 1       | 99        | 20.07                  | 19.52                  | 19.76                  | 0                         | 0        |
|           |            | 50      | 0         | 20.01                  | 19.48                  | 19.66                  | 0-1                       | 0        |
|           |            | 50      | 25        | 20.00                  | 19.47                  | 19.65                  | 0-1                       | 0        |
|           |            | 50      | 49        | 19.99                  | 19.45                  | 19.61                  | 0-1                       | 0        |
|           |            | 100     | 0         | 19.96                  | 19.47                  | 19.68                  | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.35                  | 19.84                  | 19.99                  | 0-1                       | 0        |
|           |            | 1       | 49        | 20.11                  | 19.66                  | 19.82                  | 0-1                       | 0        |
|           |            | 1       | 99        | 20.32                  | 19.82                  | 20.13                  | 0-1                       | 0        |
|           |            | 50      | 0         | 19.99                  | 19.48                  | 19.72                  | 0-2                       | 0        |
|           |            | 50      | 25        | 20.01                  | 19.52                  | 19.70                  | 0-2                       | 0        |
|           |            | 50      | 49        | 20.03                  | 19.53                  | 19.72                  | 0-2                       | 0        |
|           |            | 100     | 0         | 19.96                  | 19.52                  | 19.70                  | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.24                  | 19.77                  | 20.00                  | 0-2                       | 0        |
|           |            | 1       | 49        | 20.15                  | 19.56                  | 19.83                  | 0-2                       | 0        |
|           |            | 1       | 99        | 20.38                  | 19.72                  | 19.91                  | 0-2                       | 0        |
|           |            | 50      | 0         | 19.98                  | 19.50                  | 19.75                  | 0-3                       | 0        |
|           |            | 50      | 25        | 20.03                  | 19.53                  | 19.74                  | 0-3                       | 0        |
|           |            | 50      | 49        | 20.04                  | 19.53                  | 19.72                  | 0-3                       | 0        |
|           |            | 100     | 0         | 19.96                  | 19.50                  | 19.70                  | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.12                  | 17.65                  | 17.84                  | 0-5                       | 1.8      |
|           |            | 1       | 49        | 18.08                  | 17.49                  | 17.69                  | 0-5                       | 1.8      |
|           |            | 1       | 99        | 18.18                  | 17.57                  | 17.77                  | 0-5                       | 1.8      |
|           |            | 50      | 0         | 17.98                  | 17.48                  | 17.71                  | 0-5                       | 1.8      |
|           |            | 50      | 25        | 18.00                  | 17.50                  | 17.69                  | 0-5                       | 1.8      |
|           |            | 50      | 49        | 17.98                  | 17.51                  | 17.72                  | 0-5                       | 1.8      |
|           |            | 100     | 0         | 17.97                  | 17.48                  | 17.68                  | 0-5                       | 1.8      |

Note : The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

### 11.3.3 LTE Reduced Power (Grip sensor-on, Ear jack activated)

LTE Band 2 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18607 Ch.<br>1850.7 MHz | 18900 Ch.<br>1880 MHz | 19193 Ch.<br>1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 18.88                   | 18.41                 | 18.90                   | 0                         | 0        |
|           |            | 1       | 3         | 18.91                   | 18.47                 | 18.90                   | 0                         | 0        |
|           |            | 1       | 5         | 18.89                   | 18.39                 | 18.92                   | 0                         | 0        |
|           |            | 3       | 0         | 18.84                   | 18.39                 | 18.88                   | 0                         | 0        |
|           |            | 3       | 1         | 19.05                   | 18.52                 | 19.06                   | 0                         | 0        |
|           |            | 3       | 3         | 18.88                   | 18.42                 | 18.93                   | 0                         | 0        |
|           |            | 6       | 0         | 18.91                   | 18.38                 | 18.92                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 18.97                   | 18.61                 | 19.09                   | 0-1                       | 0        |
|           |            | 1       | 3         | 19.06                   | 18.66                 | 19.03                   | 0-1                       | 0        |
|           |            | 1       | 5         | 19.08                   | 18.60                 | 19.25                   | 0-1                       | 0        |
|           |            | 3       | 0         | 19.01                   | 18.47                 | 18.97                   | 0-1                       | 0        |
|           |            | 3       | 1         | 19.10                   | 18.63                 | 19.20                   | 0-1                       | 0        |
|           |            | 3       | 3         | 19.02                   | 18.55                 | 19.05                   | 0-1                       | 0        |
|           |            | 6       | 0         | 18.96                   | 18.55                 | 19.00                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.09                   | 18.58                 | 19.15                   | 0-2                       | 0        |
|           |            | 1       | 3         | 18.96                   | 18.49                 | 18.96                   | 0-2                       | 0        |
|           |            | 1       | 5         | 19.03                   | 18.63                 | 19.12                   | 0-2                       | 0        |
|           |            | 3       | 0         | 18.91                   | 18.54                 | 18.97                   | 0-2                       | 0        |
|           |            | 3       | 1         | 19.09                   | 18.57                 | 19.09                   | 0-2                       | 0        |
|           |            | 3       | 3         | 18.92                   | 18.44                 | 18.94                   | 0-2                       | 0        |
|           |            | 6       | 0         | 18.99                   | 18.56                 | 19.09                   | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.61                   | 17.05                 | 17.56                   | 0-5                       | 1.5      |
|           |            | 1       | 3         | 17.35                   | 17.03                 | 17.41                   | 0-5                       | 1.5      |
|           |            | 1       | 5         | 17.42                   | 16.95                 | 17.53                   | 0-5                       | 1.5      |
|           |            | 3       | 0         | 17.42                   | 16.87                 | 17.40                   | 0-5                       | 1.5      |
|           |            | 3       | 1         | 17.52                   | 16.97                 | 17.54                   | 0-5                       | 1.5      |
|           |            | 3       | 3         | 17.50                   | 17.03                 | 17.58                   | 0-5                       | 1.5      |
|           |            | 6       | 0         | 17.39                   | 16.90                 | 17.47                   | 0-5                       | 1.5      |

## LTE Band 2\_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18615 Ch. 1851.5 MHz | 18900 Ch. 1880 MHz | 19185 Ch. 1908.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 18.90                | 18.41              | 18.90                | 0                         | 0        |
|           |            | 1       | 7         | 18.89                | 18.38              | 18.88                | 0                         | 0        |
|           |            | 1       | 14        | 18.88                | 18.45              | 18.95                | 0                         | 0        |
|           |            | 8       | 0         | 18.95                | 18.52              | 19.01                | 0-1                       | 0        |
|           |            | 8       | 3         | 18.95                | 18.44              | 18.97                | 0-1                       | 0        |
|           |            | 8       | 7         | 18.98                | 18.51              | 19.02                | 0-1                       | 0        |
|           |            | 15      | 0         | 18.95                | 18.53              | 18.99                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.14                | 18.63              | 19.23                | 0-1                       | 0        |
|           |            | 1       | 7         | 19.01                | 18.62              | 19.12                | 0-1                       | 0        |
|           |            | 1       | 14        | 19.04                | 18.55              | 19.07                | 0-1                       | 0        |
|           |            | 8       | 0         | 19.02                | 18.63              | 19.10                | 0-2                       | 0        |
|           |            | 8       | 3         | 18.93                | 18.54              | 19.02                | 0-2                       | 0        |
|           |            | 8       | 7         | 19.00                | 18.55              | 19.05                | 0-2                       | 0        |
|           |            | 15      | 0         | 19.04                | 18.55              | 19.05                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.03                | 18.70              | 19.27                | 0-2                       | 0        |
|           |            | 1       | 7         | 19.08                | 18.57              | 19.06                | 0-2                       | 0        |
|           |            | 1       | 14        | 18.99                | 18.64              | 19.14                | 0-2                       | 0        |
|           |            | 8       | 0         | 19.03                | 18.53              | 19.01                | 0-3                       | 0        |
|           |            | 8       | 3         | 19.00                | 18.52              | 19.04                | 0-3                       | 0        |
|           |            | 8       | 7         | 18.95                | 18.52              | 19.05                | 0-3                       | 0        |
|           |            | 15      | 0         | 19.03                | 18.58              | 19.02                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.36                | 17.03              | 17.57                | 0-5                       | 1.5      |
|           |            | 1       | 7         | 17.41                | 16.97              | 17.54                | 0-5                       | 1.5      |
|           |            | 1       | 14        | 17.59                | 17.02              | 17.59                | 0-5                       | 1.5      |
|           |            | 8       | 0         | 17.41                | 16.93              | 17.45                | 0-5                       | 1.5      |
|           |            | 8       | 3         | 17.36                | 16.91              | 17.46                | 0-5                       | 1.5      |
|           |            | 8       | 7         | 17.40                | 16.92              | 17.49                | 0-5                       | 1.5      |
|           |            | 15      | 0         | 17.41                | 16.91              | 17.44                | 0-5                       | 1.5      |

## LTE Band 2\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18625 Ch.<br>1852.5 MHz | 18900 Ch.<br>1880 MHz | 19175 Ch.<br>1907.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 18.89                   | 18.48                 | 18.99                   | 0                         | 0        |
|           |            | 1       | 12        | 18.87                   | 18.36                 | 18.85                   | 0                         | 0        |
|           |            | 1       | 24        | 18.91                   | 18.40                 | 18.96                   | 0                         | 0        |
|           |            | 12      | 0         | 18.99                   | 18.51                 | 19.04                   | 0-1                       | 0        |
|           |            | 12      | 6         | 18.99                   | 18.54                 | 19.04                   | 0-1                       | 0        |
|           |            | 12      | 11        | 18.96                   | 18.54                 | 19.03                   | 0-1                       | 0        |
|           |            | 25      | 0         | 18.95                   | 18.53                 | 19.06                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.10                   | 18.73                 | 19.14                   | 0-1                       | 0        |
|           |            | 1       | 12        | 19.04                   | 18.62                 | 19.10                   | 0-1                       | 0        |
|           |            | 1       | 24        | 19.14                   | 18.74                 | 19.30                   | 0-1                       | 0        |
|           |            | 12      | 0         | 19.02                   | 18.56                 | 19.13                   | 0-2                       | 0        |
|           |            | 12      | 6         | 19.01                   | 18.61                 | 19.13                   | 0-2                       | 0        |
|           |            | 12      | 11        | 19.00                   | 18.55                 | 19.02                   | 0-2                       | 0        |
|           |            | 25      | 0         | 18.96                   | 18.52                 | 19.03                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.04                   | 18.63                 | 19.16                   | 0-2                       | 0        |
|           |            | 1       | 12        | 19.02                   | 18.55                 | 19.10                   | 0-2                       | 0        |
|           |            | 1       | 24        | 19.08                   | 18.68                 | 19.19                   | 0-2                       | 0        |
|           |            | 12      | 0         | 18.99                   | 18.58                 | 19.09                   | 0-3                       | 0        |
|           |            | 12      | 6         | 18.96                   | 18.57                 | 19.05                   | 0-3                       | 0        |
|           |            | 12      | 11        | 18.99                   | 18.56                 | 19.06                   | 0-3                       | 0        |
|           |            | 25      | 0         | 18.94                   | 18.56                 | 19.09                   | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.59                   | 17.01                 | 17.65                   | 0-5                       | 1.5      |
|           |            | 1       | 12        | 17.37                   | 17.02                 | 17.60                   | 0-5                       | 1.5      |
|           |            | 1       | 24        | 17.56                   | 17.14                 | 17.55                   | 0-5                       | 1.5      |
|           |            | 12      | 0         | 17.45                   | 16.97                 | 17.55                   | 0-5                       | 1.5      |
|           |            | 12      | 6         | 17.44                   | 16.94                 | 17.48                   | 0-5                       | 1.5      |
|           |            | 12      | 11        | 17.39                   | 16.93                 | 17.49                   | 0-5                       | 1.5      |
|           |            | 25      | 0         | 17.46                   | 17.00                 | 17.53                   | 0-5                       | 1.5      |

## LTE Band 2 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18650 Ch.<br>1855 MHz | 18900 Ch.<br>1880 MHz | 19150 Ch.<br>1905 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 18.93                 | 18.44                 | 19.01                 | 0                         | 0        |
|           |            | 1       | 24        | 18.86                 | 18.44                 | 18.97                 | 0                         | 0        |
|           |            | 1       | 49        | 18.88                 | 18.48                 | 18.96                 | 0                         | 0        |
|           |            | 25      | 0         | 18.97                 | 18.52                 | 19.06                 | 0-1                       | 0        |
|           |            | 25      | 12        | 18.97                 | 18.55                 | 19.06                 | 0-1                       | 0        |
|           |            | 25      | 24        | 18.96                 | 18.51                 | 19.02                 | 0-1                       | 0        |
|           |            | 50      | 0         | 18.94                 | 18.49                 | 18.98                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.06                 | 18.69                 | 19.22                 | 0-1                       | 0        |
|           |            | 1       | 24        | 19.02                 | 18.55                 | 19.15                 | 0-1                       | 0        |
|           |            | 1       | 49        | 19.16                 | 18.62                 | 19.13                 | 0-1                       | 0        |
|           |            | 25      | 0         | 18.97                 | 18.58                 | 19.07                 | 0-2                       | 0        |
|           |            | 25      | 12        | 18.90                 | 18.57                 | 19.03                 | 0-2                       | 0        |
|           |            | 25      | 24        | 18.95                 | 18.59                 | 19.08                 | 0-2                       | 0        |
|           |            | 50      | 0         | 18.95                 | 18.57                 | 19.01                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.03                 | 18.78                 | 19.25                 | 0-2                       | 0        |
|           |            | 1       | 24        | 19.00                 | 18.59                 | 19.15                 | 0-2                       | 0        |
|           |            | 1       | 49        | 19.00                 | 18.73                 | 19.12                 | 0-2                       | 0        |
|           |            | 25      | 0         | 18.94                 | 18.54                 | 19.06                 | 0-3                       | 0        |
|           |            | 25      | 12        | 18.93                 | 18.50                 | 19.01                 | 0-3                       | 0        |
|           |            | 25      | 24        | 18.91                 | 18.52                 | 19.03                 | 0-3                       | 0        |
|           |            | 50      | 0         | 18.96                 | 18.59                 | 19.01                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.51                 | 17.21                 | 17.71                 | 0-5                       | 1.5      |
|           |            | 1       | 24        | 17.36                 | 17.04                 | 17.56                 | 0-5                       | 1.5      |
|           |            | 1       | 49        | 17.55                 | 17.14                 | 17.62                 | 0-5                       | 1.5      |
|           |            | 25      | 0         | 17.39                 | 16.98                 | 17.52                 | 0-5                       | 1.5      |
|           |            | 25      | 12        | 17.40                 | 17.00                 | 17.47                 | 0-5                       | 1.5      |
|           |            | 25      | 24        | 17.45                 | 16.94                 | 17.50                 | 0-5                       | 1.5      |
|           |            | 50      | 0         | 17.44                 | 17.00                 | 17.50                 | 0-5                       | 1.5      |

## LTE Band 2 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18675 Ch. 1857.5 MHz | 18900 Ch. 1880 MHz | 19125 Ch. 1902.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 18.94                | 18.55              | 19.04                | 0                         | 0        |
|           |            | 1       | 36        | 18.77                | 18.42              | 18.84                | 0                         | 0        |
|           |            | 1       | 74        | 18.95                | 18.53              | 18.96                | 0                         | 0        |
|           |            | 36      | 0         | 18.94                | 18.50              | 18.94                | 0-1                       | 0        |
|           |            | 36      | 18        | 18.96                | 18.49              | 18.99                | 0-1                       | 0        |
|           |            | 36      | 39        | 18.94                | 18.54              | 18.95                | 0-1                       | 0        |
|           |            | 75      | 0         | 18.94                | 18.49              | 18.97                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.17                | 18.89              | 19.16                | 0-1                       | 0        |
|           |            | 1       | 36        | 18.99                | 18.67              | 19.03                | 0-1                       | 0        |
|           |            | 1       | 74        | 19.24                | 18.75              | 19.19                | 0-1                       | 0        |
|           |            | 36      | 0         | 18.96                | 18.55              | 19.00                | 0-2                       | 0        |
|           |            | 36      | 18        | 18.97                | 18.54              | 18.96                | 0-2                       | 0        |
|           |            | 36      | 39        | 18.93                | 18.49              | 18.96                | 0-2                       | 0        |
|           |            | 75      | 0         | 18.97                | 18.50              | 18.96                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 18.98                | 18.80              | 19.21                | 0-2                       | 0        |
|           |            | 1       | 36        | 18.87                | 18.38              | 19.01                | 0-2                       | 0        |
|           |            | 1       | 74        | 19.06                | 18.58              | 19.28                | 0-2                       | 0        |
|           |            | 36      | 0         | 18.93                | 18.57              | 19.00                | 0-3                       | 0        |
|           |            | 36      | 18        | 18.96                | 18.52              | 18.96                | 0-3                       | 0        |
|           |            | 36      | 39        | 18.95                | 18.58              | 18.98                | 0-3                       | 0        |
|           |            | 75      | 0         | 18.92                | 18.55              | 18.98                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.46                | 17.10              | 17.66                | 0-5                       | 1.5      |
|           |            | 1       | 36        | 17.49                | 17.03              | 17.43                | 0-5                       | 1.5      |
|           |            | 1       | 74        | 17.46                | 16.99              | 17.52                | 0-5                       | 1.5      |
|           |            | 36      | 0         | 17.43                | 16.98              | 17.46                | 0-5                       | 1.5      |
|           |            | 36      | 18        | 17.40                | 17.04              | 17.45                | 0-5                       | 1.5      |
|           |            | 36      | 39        | 17.45                | 16.95              | 17.43                | 0-5                       | 1.5      |
|           |            | 75      | 0         | 17.44                | 17.02              | 17.48                | 0-5                       | 1.5      |

**LTE Band 2 \_ 20 MHz Bandwidth**

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18700 Ch.<br>1860 MHz | 18900 Ch.<br>1880 MHz | 19100 Ch.<br>1900 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 18.84                 | 18.54                 | 18.97                 | 0                         | 0        |
|           |            | 1       | 49        | 18.77                 | 18.44                 | 18.85                 | 0                         | 0        |
|           |            | 1       | 99        | 18.82                 | 18.44                 | 18.92                 | 0                         | 0        |
|           |            | 50      | 0         | 18.86                 | 18.47                 | 18.88                 | 0-1                       | 0        |
|           |            | 50      | 25        | 18.85                 | 18.45                 | 18.84                 | 0-1                       | 0        |
|           |            | 50      | 49        | 18.86                 | 18.45                 | 18.85                 | 0-1                       | 0        |
|           |            | 100     | 0         | 18.85                 | 18.50                 | 18.92                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.19                 | 18.82                 | 19.27                 | 0-1                       | 0        |
|           |            | 1       | 49        | 18.92                 | 18.69                 | 18.96                 | 0-1                       | 0        |
|           |            | 1       | 99        | 18.95                 | 18.66                 | 19.20                 | 0-1                       | 0        |
|           |            | 50      | 0         | 18.86                 | 18.48                 | 18.94                 | 0-2                       | 0        |
|           |            | 50      | 25        | 18.83                 | 18.48                 | 18.90                 | 0-2                       | 0        |
|           |            | 50      | 49        | 18.84                 | 18.44                 | 18.87                 | 0-2                       | 0        |
|           |            | 100     | 0         | 18.83                 | 18.50                 | 18.89                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 18.97                 | 18.85                 | 19.17                 | 0-2                       | 0        |
|           |            | 1       | 49        | 18.94                 | 18.69                 | 19.03                 | 0-2                       | 0        |
|           |            | 1       | 99        | 19.05                 | 18.70                 | 19.15                 | 0-2                       | 0        |
|           |            | 50      | 0         | 18.85                 | 18.53                 | 18.97                 | 0-3                       | 0        |
|           |            | 50      | 25        | 18.88                 | 18.50                 | 18.89                 | 0-3                       | 0        |
|           |            | 50      | 49        | 18.84                 | 18.47                 | 18.93                 | 0-3                       | 0        |
|           |            | 100     | 0         | 18.87                 | 18.47                 | 18.90                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.55                 | 17.12                 | 17.56                 | 0-5                       | 1.5      |
|           |            | 1       | 49        | 17.43                 | 17.22                 | 17.40                 | 0-5                       | 1.5      |
|           |            | 1       | 99        | 17.51                 | 17.24                 | 17.51                 | 0-5                       | 1.5      |
|           |            | 50      | 0         | 17.36                 | 17.02                 | 17.44                 | 0-5                       | 1.5      |
|           |            | 50      | 25        | 17.33                 | 16.99                 | 17.40                 | 0-5                       | 1.5      |
|           |            | 50      | 49        | 17.36                 | 16.98                 | 17.37                 | 0-5                       | 1.5      |
|           |            | 100     | 0         | 17.36                 | 17.00                 | 17.42                 | 0-5                       | 1.5      |

[ LTE Band 4 Conducted Power ]

LTE Band 4 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19957 Ch. 1710.7 MHz | 20175 Ch. 1732.5 MHz | 20393 Ch. 1754.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.07                | 19.68                | 19.40                | 0                         | 0        |
|           |            | 1       | 3         | 20.08                | 19.68                | 19.40                | 0                         | 0        |
|           |            | 1       | 5         | 20.11                | 19.70                | 19.40                | 0                         | 0        |
|           |            | 3       | 0         | 20.07                | 19.64                | 19.40                | 0                         | 0        |
|           |            | 3       | 1         | 20.25                | 19.77                | 19.46                | 0                         | 0        |
|           |            | 3       | 3         | 20.12                | 19.68                | 19.47                | 0                         | 0        |
|           |            | 6       | 0         | 20.06                | 19.67                | 19.42                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.38                | 19.92                | 19.59                | 0-1                       | 0        |
|           |            | 1       | 3         | 20.07                | 19.81                | 19.41                | 0-1                       | 0        |
|           |            | 1       | 5         | 20.34                | 19.85                | 19.67                | 0-1                       | 0        |
|           |            | 3       | 0         | 20.13                | 19.79                | 19.51                | 0-1                       | 0        |
|           |            | 3       | 1         | 20.28                | 20.00                | 19.65                | 0-1                       | 0        |
|           |            | 3       | 3         | 20.27                | 19.85                | 19.57                | 0-1                       | 0        |
|           |            | 6       | 0         | 20.26                | 19.83                | 19.62                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.27                | 19.84                | 19.55                | 0-2                       | 0        |
|           |            | 1       | 3         | 20.14                | 19.74                | 19.53                | 0-2                       | 0        |
|           |            | 1       | 5         | 20.30                | 19.78                | 19.50                | 0-2                       | 0        |
|           |            | 3       | 0         | 20.21                | 19.74                | 19.44                | 0-2                       | 0        |
|           |            | 3       | 1         | 20.30                | 19.89                | 19.65                | 0-2                       | 0        |
|           |            | 3       | 3         | 20.19                | 19.70                | 19.57                | 0-2                       | 0        |
|           |            | 6       | 0         | 20.26                | 19.82                | 19.52                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.19                | 17.84                | 17.56                | 0-5                       | 2        |
|           |            | 1       | 3         | 18.11                | 17.75                | 17.41                | 0-5                       | 2        |
|           |            | 1       | 5         | 18.21                | 17.86                | 17.46                | 0-5                       | 2        |
|           |            | 3       | 0         | 18.11                | 17.69                | 17.41                | 0-5                       | 2        |
|           |            | 3       | 1         | 18.12                | 17.72                | 17.46                | 0-5                       | 2        |
|           |            | 3       | 3         | 18.21                | 17.78                | 17.49                | 0-5                       | 2        |
|           |            | 6       | 0         | 18.15                | 17.70                | 17.39                | 0-5                       | 2        |

## LTE Band 4 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19965 Ch. 1711.5 MHz | 20175 Ch. 1732.5 MHz | 20385 Ch. 1753.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 20.04                | 19.73                | 19.43                | 0                         | 0        |
|           |            | 1       | 7         | 20.12                | 19.64                | 19.33                | 0                         | 0        |
|           |            | 1       | 14        | 20.15                | 19.73                | 19.46                | 0                         | 0        |
|           |            | 8       | 0         | 20.20                | 19.77                | 19.52                | 0-1                       | 0        |
|           |            | 8       | 3         | 20.19                | 19.75                | 19.49                | 0-1                       | 0        |
|           |            | 8       | 7         | 20.20                | 19.82                | 19.54                | 0-1                       | 0        |
|           |            | 15      | 0         | 20.24                | 19.79                | 19.55                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.25                | 20.04                | 19.68                | 0-1                       | 0        |
|           |            | 1       | 7         | 20.23                | 19.92                | 19.60                | 0-1                       | 0        |
|           |            | 1       | 14        | 20.31                | 19.96                | 19.70                | 0-1                       | 0        |
|           |            | 8       | 0         | 20.27                | 19.91                | 19.60                | 0-2                       | 0        |
|           |            | 8       | 3         | 20.27                | 19.81                | 19.60                | 0-2                       | 0        |
|           |            | 8       | 7         | 20.28                | 19.88                | 19.63                | 0-2                       | 0        |
|           |            | 15      | 0         | 20.30                | 19.83                | 19.55                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.40                | 19.97                | 19.63                | 0-2                       | 0        |
|           |            | 1       | 7         | 20.25                | 19.68                | 19.52                | 0-2                       | 0        |
|           |            | 1       | 14        | 20.24                | 19.83                | 19.59                | 0-2                       | 0        |
|           |            | 8       | 0         | 20.24                | 19.83                | 19.56                | 0-3                       | 0        |
|           |            | 8       | 3         | 20.21                | 19.77                | 19.54                | 0-3                       | 0        |
|           |            | 8       | 7         | 20.29                | 19.85                | 19.55                | 0-3                       | 0        |
|           |            | 15      | 0         | 20.27                | 19.82                | 19.54                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.24                | 17.90                | 17.59                | 0-5                       | 2        |
|           |            | 1       | 7         | 18.22                | 17.62                | 17.29                | 0-5                       | 2        |
|           |            | 1       | 14        | 18.27                | 17.63                | 17.42                | 0-5                       | 2        |
|           |            | 8       | 0         | 18.15                | 17.71                | 17.44                | 0-5                       | 2        |
|           |            | 8       | 3         | 18.18                | 17.63                | 17.44                | 0-5                       | 2        |
|           |            | 8       | 7         | 18.20                | 17.73                | 17.44                | 0-5                       | 2        |
|           |            | 15      | 0         | 18.17                | 17.73                | 17.48                | 0-5                       | 2        |

## LTE Band 4 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19975 Ch. 1712.5 MHz | 20175 Ch. 1732.5 MHz | 20375 Ch. 1752.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.11                | 19.73                | 19.40                | 0                         | 0        |
|           |            | 1       | 12        | 20.01                | 19.67                | 19.32                | 0                         | 0        |
|           |            | 1       | 24        | 20.12                | 19.76                | 19.39                | 0                         | 0        |
|           |            | 12      | 0         | 20.22                | 19.84                | 19.46                | 0-1                       | 0        |
|           |            | 12      | 6         | 20.20                | 19.81                | 19.46                | 0-1                       | 0        |
|           |            | 12      | 11        | 20.22                | 19.85                | 19.50                | 0-1                       | 0        |
|           |            | 25      | 0         | 20.21                | 19.82                | 19.48                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.37                | 19.95                | 19.51                | 0-1                       | 0        |
|           |            | 1       | 12        | 20.31                | 19.94                | 19.54                | 0-1                       | 0        |
|           |            | 1       | 24        | 20.42                | 19.92                | 19.69                | 0-1                       | 0        |
|           |            | 12      | 0         | 20.24                | 19.83                | 19.48                | 0-2                       | 0        |
|           |            | 12      | 6         | 20.23                | 19.86                | 19.47                | 0-2                       | 0        |
|           |            | 12      | 11        | 20.21                | 19.84                | 19.47                | 0-2                       | 0        |
|           |            | 25      | 0         | 20.26                | 19.81                | 19.54                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.26                | 19.92                | 19.56                | 0-2                       | 0        |
|           |            | 1       | 12        | 20.12                | 19.71                | 19.38                | 0-2                       | 0        |
|           |            | 1       | 24        | 20.43                | 19.97                | 19.55                | 0-2                       | 0        |
|           |            | 12      | 0         | 20.26                | 19.86                | 19.54                | 0-3                       | 0        |
|           |            | 12      | 6         | 20.26                | 19.82                | 19.43                | 0-3                       | 0        |
|           |            | 12      | 11        | 20.29                | 19.85                | 19.48                | 0-3                       | 0        |
|           |            | 25      | 0         | 20.27                | 19.83                | 19.47                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.12                | 17.88                | 17.46                | 0-5                       | 2        |
|           |            | 1       | 12        | 18.15                | 17.75                | 17.46                | 0-5                       | 2        |
|           |            | 1       | 24        | 18.31                | 17.84                | 17.51                | 0-5                       | 2        |
|           |            | 12      | 0         | 18.20                | 17.73                | 17.35                | 0-5                       | 2        |
|           |            | 12      | 6         | 18.18                | 17.69                | 17.39                | 0-5                       | 2        |
|           |            | 12      | 11        | 18.17                | 17.74                | 17.39                | 0-5                       | 2        |
|           |            | 25      | 0         | 18.23                | 17.76                | 17.39                | 0-5                       | 2        |

**LTE Band 4 \_ 10 MHz Bandwidth**

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                         |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-------------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 20000 Ch.<br>1715 MHz | 20175 Ch.<br>1732.5 MHz | 20350 Ch.<br>1750 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.09                 | 19.75                   | 19.46                 | 0                         | 0        |
|           |            | 1       | 24        | 20.12                 | 19.73                   | 19.45                 | 0                         | 0        |
|           |            | 1       | 49        | 20.20                 | 19.84                   | 19.52                 | 0                         | 0        |
|           |            | 25      | 0         | 20.22                 | 19.87                   | 19.56                 | 0-1                       | 0        |
|           |            | 25      | 12        | 20.20                 | 19.81                   | 19.54                 | 0-1                       | 0        |
|           |            | 25      | 24        | 20.21                 | 19.83                   | 19.54                 | 0-1                       | 0        |
|           |            | 50      | 0         | 20.22                 | 19.78                   | 19.52                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.32                 | 20.08                   | 19.70                 | 0-1                       | 0        |
|           |            | 1       | 24        | 20.22                 | 19.97                   | 19.63                 | 0-1                       | 0        |
|           |            | 1       | 49        | 20.38                 | 19.92                   | 19.70                 | 0-1                       | 0        |
|           |            | 25      | 0         | 20.26                 | 19.84                   | 19.50                 | 0-2                       | 0        |
|           |            | 25      | 12        | 20.21                 | 19.82                   | 19.59                 | 0-2                       | 0        |
|           |            | 25      | 24        | 20.20                 | 19.81                   | 19.60                 | 0-2                       | 0        |
|           |            | 50      | 0         | 20.19                 | 19.81                   | 19.53                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.43                 | 20.04                   | 19.61                 | 0-2                       | 0        |
|           |            | 1       | 24        | 20.24                 | 19.96                   | 19.55                 | 0-2                       | 0        |
|           |            | 1       | 49        | 20.42                 | 19.95                   | 19.62                 | 0-2                       | 0        |
|           |            | 25      | 0         | 20.21                 | 19.84                   | 19.54                 | 0-3                       | 0        |
|           |            | 25      | 12        | 20.18                 | 19.85                   | 19.50                 | 0-3                       | 0        |
|           |            | 25      | 24        | 20.17                 | 19.82                   | 19.59                 | 0-3                       | 0        |
|           |            | 50      | 0         | 20.22                 | 19.82                   | 19.56                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.28                 | 17.92                   | 17.52                 | 0-5                       | 2        |
|           |            | 1       | 24        | 18.12                 | 17.79                   | 17.66                 | 0-5                       | 2        |
|           |            | 1       | 49        | 18.27                 | 17.85                   | 17.61                 | 0-5                       | 2        |
|           |            | 25      | 0         | 18.20                 | 17.75                   | 17.45                 | 0-5                       | 2        |
|           |            | 25      | 12        | 18.14                 | 17.73                   | 17.50                 | 0-5                       | 2        |
|           |            | 25      | 24        | 18.16                 | 17.77                   | 17.46                 | 0-5                       | 2        |
|           |            | 50      | 0         | 18.25                 | 17.82                   | 17.54                 | 0-5                       | 2        |

**LTE Band 4 \_ 15 MHz Bandwidth**

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20025 Ch. 1717.5 MHz | 20175 Ch. 1732.5 MHz | 20325 Ch. 1747.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 20.01                | 19.77                | 19.48                | 0                         | 0        |
|           |            | 1       | 36        | 19.99                | 19.68                | 19.39                | 0                         | 0        |
|           |            | 1       | 74        | 20.15                | 19.81                | 19.54                | 0                         | 0        |
|           |            | 36      | 0         | 20.13                | 19.77                | 19.51                | 0-1                       | 0        |
|           |            | 36      | 18        | 20.16                | 19.81                | 19.51                | 0-1                       | 0        |
|           |            | 36      | 39        | 20.17                | 19.82                | 19.51                | 0-1                       | 0        |
|           |            | 75      | 0         | 20.16                | 19.78                | 19.51                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.23                | 19.92                | 19.57                | 0-1                       | 0        |
|           |            | 1       | 36        | 20.15                | 19.97                | 19.50                | 0-1                       | 0        |
|           |            | 1       | 74        | 20.38                | 20.11                | 19.72                | 0-1                       | 0        |
|           |            | 36      | 0         | 20.10                | 19.81                | 19.48                | 0-2                       | 0        |
|           |            | 36      | 18        | 20.10                | 19.83                | 19.51                | 0-2                       | 0        |
|           |            | 36      | 39        | 20.14                | 19.82                | 19.51                | 0-2                       | 0        |
|           |            | 75      | 0         | 20.11                | 19.80                | 19.50                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.24                | 19.91                | 19.72                | 0-2                       | 0        |
|           |            | 1       | 36        | 20.15                | 19.84                | 19.52                | 0-2                       | 0        |
|           |            | 1       | 74        | 20.34                | 19.96                | 19.72                | 0-2                       | 0        |
|           |            | 36      | 0         | 20.12                | 19.82                | 19.55                | 0-3                       | 0        |
|           |            | 36      | 18        | 20.16                | 19.83                | 19.52                | 0-3                       | 0        |
|           |            | 36      | 39        | 20.19                | 19.83                | 19.57                | 0-3                       | 0        |
|           |            | 75      | 0         | 20.16                | 19.80                | 19.52                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.22                | 17.81                | 17.62                | 0-5                       | 2        |
|           |            | 1       | 36        | 18.09                | 17.80                | 17.58                | 0-5                       | 2        |
|           |            | 1       | 74        | 18.23                | 17.88                | 17.57                | 0-5                       | 2        |
|           |            | 36      | 0         | 18.09                | 17.74                | 17.51                | 0-5                       | 2        |
|           |            | 36      | 18        | 18.12                | 17.75                | 17.46                | 0-5                       | 2        |
|           |            | 36      | 39        | 18.10                | 17.78                | 17.49                | 0-5                       | 2        |
|           |            | 75      | 0         | 18.11                | 17.79                | 17.50                | 0-5                       | 2        |

## LTE Band 4 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|---------------------------|----------|
|           |            |         |           | 20175 Ch.<br>1732.5 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.68                   | 0                         | 0        |
|           |            | 1       | 49        | 19.69                   | 0                         | 0        |
|           |            | 1       | 99        | 19.79                   | 0                         | 0        |
|           |            | 50      | 0         | 19.73                   | 0-1                       | 0        |
|           |            | 50      | 25        | 19.75                   | 0-1                       | 0        |
|           |            | 50      | 49        | 19.79                   | 0-1                       | 0        |
|           |            | 100     | 0         | 19.79                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.01                   | 0-1                       | 0        |
|           |            | 1       | 49        | 19.88                   | 0-1                       | 0        |
|           |            | 1       | 99        | 19.95                   | 0-1                       | 0        |
|           |            | 50      | 0         | 19.75                   | 0-2                       | 0        |
|           |            | 50      | 25        | 19.81                   | 0-2                       | 0        |
|           |            | 50      | 49        | 19.78                   | 0-2                       | 0        |
|           |            | 100     | 0         | 19.76                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.05                   | 0-2                       | 0        |
|           |            | 1       | 49        | 19.98                   | 0-2                       | 0        |
|           |            | 1       | 99        | 19.97                   | 0-2                       | 0        |
|           |            | 50      | 0         | 19.78                   | 0-3                       | 0        |
|           |            | 50      | 25        | 19.82                   | 0-3                       | 0        |
|           |            | 50      | 49        | 19.82                   | 0-3                       | 0        |
|           |            | 100     | 0         | 19.77                   | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.71                   | 0-5                       | 2        |
|           |            | 1       | 49        | 17.80                   | 0-5                       | 2        |
|           |            | 1       | 99        | 17.91                   | 0-5                       | 2        |
|           |            | 50      | 0         | 17.81                   | 0-5                       | 2        |
|           |            | 50      | 25        | 17.84                   | 0-5                       | 2        |
|           |            | 50      | 49        | 17.80                   | 0-5                       | 2        |
|           |            | 100     | 0         | 17.80                   | 0-5                       | 2        |

[ LTE Band 25 Conducted Power ]  
LTE Band 25 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26047 Ch. 1850.7 MHz | 26365 Ch. 1882.5 MHz | 26683 Ch. 1914.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 18.86                | 18.39                | 18.72                | 0                         | 0        |
|           |            | 1       | 3         | 18.84                | 18.43                | 18.69                | 0                         | 0        |
|           |            | 1       | 5         | 18.90                | 18.43                | 18.67                | 0                         | 0        |
|           |            | 3       | 0         | 18.80                | 18.35                | 18.64                | 0                         | 0        |
|           |            | 3       | 1         | 18.95                | 18.53                | 18.81                | 0                         | 0        |
|           |            | 3       | 3         | 18.84                | 18.44                | 18.71                | 0                         | 0        |
|           |            | 6       | 0         | 18.85                | 18.42                | 18.68                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 18.98                | 18.59                | 18.85                | 0-1                       | 0        |
|           |            | 1       | 3         | 18.84                | 18.54                | 18.67                | 0-1                       | 0        |
|           |            | 1       | 5         | 19.05                | 18.61                | 18.83                | 0-1                       | 0        |
|           |            | 3       | 0         | 18.90                | 18.43                | 18.67                | 0-1                       | 0        |
|           |            | 3       | 1         | 19.08                | 18.68                | 18.89                | 0-1                       | 0        |
|           |            | 3       | 3         | 19.02                | 18.50                | 18.76                | 0-1                       | 0        |
|           |            | 6       | 0         | 18.94                | 18.43                | 18.77                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.00                | 18.61                | 18.78                | 0-2                       | 0        |
|           |            | 1       | 3         | 18.91                | 18.45                | 18.73                | 0-2                       | 0        |
|           |            | 1       | 5         | 19.01                | 18.58                | 18.83                | 0-2                       | 0        |
|           |            | 3       | 0         | 18.88                | 18.44                | 18.71                | 0-2                       | 0        |
|           |            | 3       | 1         | 19.05                | 18.50                | 18.81                | 0-2                       | 0        |
|           |            | 3       | 3         | 18.99                | 18.37                | 18.77                | 0-2                       | 0        |
|           |            | 6       | 0         | 18.96                | 18.55                | 18.79                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.48                | 16.99                | 17.35                | 0-5                       | 1.5      |
|           |            | 1       | 3         | 17.27                | 17.04                | 17.27                | 0-5                       | 1.5      |
|           |            | 1       | 5         | 17.48                | 17.00                | 17.24                | 0-5                       | 1.5      |
|           |            | 3       | 0         | 17.35                | 16.94                | 17.22                | 0-5                       | 1.5      |
|           |            | 3       | 1         | 17.40                | 17.00                | 17.31                | 0-5                       | 1.5      |
|           |            | 3       | 3         | 17.42                | 17.09                | 17.22                | 0-5                       | 1.5      |
|           |            | 6       | 0         | 17.37                | 16.94                | 17.20                | 0-5                       | 1.5      |

## LTE Band 25 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26055 Ch. 1851.5 MHz | 26365 Ch. 1882.5 MHz | 26675 Ch. 1913.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 18.80                | 18.43                | 18.66                | 0                         | 0        |
|           |            | 1       | 7         | 18.73                | 18.36                | 18.64                | 0                         | 0        |
|           |            | 1       | 14        | 18.84                | 18.46                | 18.76                | 0                         | 0        |
|           |            | 8       | 0         | 18.93                | 18.52                | 18.78                | 0-1                       | 0        |
|           |            | 8       | 3         | 18.92                | 18.51                | 18.77                | 0-1                       | 0        |
|           |            | 8       | 7         | 18.92                | 18.49                | 18.79                | 0-1                       | 0        |
|           |            | 15      | 0         | 18.97                | 18.56                | 18.83                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.03                | 18.68                | 18.94                | 0-1                       | 0        |
|           |            | 1       | 7         | 19.06                | 18.58                | 18.78                | 0-1                       | 0        |
|           |            | 1       | 14        | 19.04                | 18.50                | 18.91                | 0-1                       | 0        |
|           |            | 8       | 0         | 18.98                | 18.46                | 18.81                | 0-2                       | 0        |
|           |            | 8       | 3         | 18.94                | 18.49                | 18.80                | 0-2                       | 0        |
|           |            | 8       | 7         | 18.97                | 18.54                | 18.82                | 0-2                       | 0        |
|           |            | 15      | 0         | 18.93                | 18.52                | 18.80                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.04                | 18.52                | 18.93                | 0-2                       | 0        |
|           |            | 1       | 7         | 18.95                | 18.44                | 18.88                | 0-2                       | 0        |
|           |            | 1       | 14        | 19.01                | 18.53                | 18.86                | 0-2                       | 0        |
|           |            | 8       | 0         | 18.88                | 18.52                | 18.78                | 0-3                       | 0        |
|           |            | 8       | 3         | 18.90                | 18.48                | 18.73                | 0-3                       | 0        |
|           |            | 8       | 7         | 18.91                | 18.55                | 18.78                | 0-3                       | 0        |
|           |            | 15      | 0         | 18.94                | 18.51                | 18.84                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.48                | 17.17                | 17.40                | 0-5                       | 1.5      |
|           |            | 1       | 7         | 17.45                | 17.00                | 17.37                | 0-5                       | 1.5      |
|           |            | 1       | 14        | 17.44                | 16.99                | 17.32                | 0-5                       | 1.5      |
|           |            | 8       | 0         | 17.43                | 17.00                | 17.24                | 0-5                       | 1.5      |
|           |            | 8       | 3         | 17.38                | 17.00                | 17.24                | 0-5                       | 1.5      |
|           |            | 8       | 7         | 17.42                | 16.97                | 17.27                | 0-5                       | 1.5      |
|           |            | 15      | 0         | 17.42                | 16.97                | 17.26                | 0-5                       | 1.5      |

## LTE Band 25 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26065 Ch. 1852.5 MHz | 26365 Ch. 1882.5 MHz | 26665 Ch. 1912.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 18.89                | 18.53                | 18.80                | 0                         | 0        |
|           |            | 1       | 12        | 18.81                | 18.39                | 18.75                | 0                         | 0        |
|           |            | 1       | 24        | 18.91                | 18.43                | 18.78                | 0                         | 0        |
|           |            | 12      | 0         | 18.99                | 18.57                | 18.85                | 0-1                       | 0        |
|           |            | 12      | 6         | 18.97                | 18.54                | 18.87                | 0-1                       | 0        |
|           |            | 12      | 11        | 18.97                | 18.56                | 18.88                | 0-1                       | 0        |
|           |            | 25      | 0         | 18.96                | 18.52                | 18.84                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.07                | 18.74                | 18.92                | 0-1                       | 0        |
|           |            | 1       | 12        | 18.99                | 18.56                | 18.92                | 0-1                       | 0        |
|           |            | 1       | 24        | 19.11                | 18.76                | 19.05                | 0-1                       | 0        |
|           |            | 12      | 0         | 18.98                | 18.52                | 18.82                | 0-2                       | 0        |
|           |            | 12      | 6         | 18.98                | 18.52                | 18.87                | 0-2                       | 0        |
|           |            | 12      | 11        | 18.93                | 18.49                | 18.80                | 0-2                       | 0        |
|           |            | 25      | 0         | 18.96                | 18.50                | 18.82                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.02                | 18.46                | 18.90                | 0-2                       | 0        |
|           |            | 1       | 12        | 18.94                | 18.35                | 18.80                | 0-2                       | 0        |
|           |            | 1       | 24        | 19.05                | 18.55                | 18.87                | 0-2                       | 0        |
|           |            | 12      | 0         | 18.94                | 18.55                | 18.88                | 0-3                       | 0        |
|           |            | 12      | 6         | 18.93                | 18.50                | 18.81                | 0-3                       | 0        |
|           |            | 12      | 11        | 18.97                | 18.52                | 18.83                | 0-3                       | 0        |
|           |            | 25      | 0         | 18.94                | 18.47                | 18.87                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.43                | 17.11                | 17.38                | 0-5                       | 1.5      |
|           |            | 1       | 12        | 17.39                | 16.90                | 17.32                | 0-5                       | 1.5      |
|           |            | 1       | 24        | 17.45                | 17.18                | 17.46                | 0-5                       | 1.5      |
|           |            | 12      | 0         | 17.45                | 17.01                | 17.31                | 0-5                       | 1.5      |
|           |            | 12      | 6         | 17.42                | 16.99                | 17.29                | 0-5                       | 1.5      |
|           |            | 12      | 11        | 17.38                | 16.98                | 17.32                | 0-5                       | 1.5      |
|           |            | 25      | 0         | 17.44                | 17.02                | 17.34                | 0-5                       | 1.5      |

## LTE Band 25 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26090 Ch. 1855 MHz  | 26365 Ch. 1882.5 MHz | 26640 Ch. 1910 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 18.92               | 18.49                | 18.96              | 0                         | 0        |
|           |            | 1       | 24        | 18.88               | 18.45                | 18.89              | 0                         | 0        |
|           |            | 1       | 49        | 18.93               | 18.48                | 18.94              | 0                         | 0        |
|           |            | 25      | 0         | 18.96               | 18.54                | 19.00              | 0-1                       | 0        |
|           |            | 25      | 12        | 18.94               | 18.52                | 19.00              | 0-1                       | 0        |
|           |            | 25      | 24        | 18.93               | 18.51                | 18.98              | 0-1                       | 0        |
|           |            | 50      | 0         | 18.99               | 18.53                | 19.01              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.10               | 18.60                | 19.17              | 0-1                       | 0        |
|           |            | 1       | 24        | 19.02               | 18.52                | 19.05              | 0-1                       | 0        |
|           |            | 1       | 49        | 19.03               | 18.66                | 19.00              | 0-1                       | 0        |
|           |            | 25      | 0         | 18.93               | 18.54                | 18.99              | 0-2                       | 0        |
|           |            | 25      | 12        | 18.93               | 18.51                | 18.95              | 0-2                       | 0        |
|           |            | 25      | 24        | 18.97               | 18.48                | 19.00              | 0-2                       | 0        |
|           |            | 50      | 0         | 18.98               | 18.57                | 19.02              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.11               | 18.67                | 19.14              | 0-2                       | 0        |
|           |            | 1       | 24        | 19.08               | 18.60                | 19.08              | 0-2                       | 0        |
|           |            | 1       | 49        | 19.12               | 18.65                | 19.04              | 0-2                       | 0        |
|           |            | 25      | 0         | 18.88               | 18.50                | 19.00              | 0-3                       | 0        |
|           |            | 25      | 12        | 18.90               | 18.47                | 18.96              | 0-3                       | 0        |
|           |            | 25      | 24        | 18.95               | 18.49                | 18.97              | 0-3                       | 0        |
|           |            | 50      | 0         | 18.99               | 18.52                | 19.02              | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.48               | 17.15                | 17.45              | 0-5                       | 1.5      |
|           |            | 1       | 24        | 17.49               | 17.05                | 17.44              | 0-5                       | 1.5      |
|           |            | 1       | 49        | 17.44               | 17.09                | 17.45              | 0-5                       | 1.5      |
|           |            | 25      | 0         | 17.46               | 17.01                | 17.43              | 0-5                       | 1.5      |
|           |            | 25      | 12        | 17.42               | 16.98                | 17.49              | 0-5                       | 1.5      |
|           |            | 25      | 24        | 17.42               | 17.00                | 17.48              | 0-5                       | 1.5      |
|           |            | 50      | 0         | 17.45               | 17.02                | 17.48              | 0-5                       | 1.5      |

## LTE Band 25 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26115 Ch. 1857.5 MHz | 26365 Ch. 1882.5 MHz | 26615 Ch. 1907.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 19.05                | 18.67                | 19.14                | 0                         | 0        |
|           |            | 1       | 36        | 18.89                | 18.48                | 18.99                | 0                         | 0        |
|           |            | 1       | 74        | 19.01                | 18.58                | 19.10                | 0                         | 0        |
|           |            | 36      | 0         | 19.10                | 18.70                | 19.17                | 0-1                       | 0        |
|           |            | 36      | 18        | 19.11                | 18.70                | 19.16                | 0-1                       | 0        |
|           |            | 36      | 39        | 19.07                | 18.68                | 19.13                | 0-1                       | 0        |
|           |            | 75      | 0         | 19.05                | 18.65                | 19.15                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.17                | 18.79                | 19.27                | 0-1                       | 0        |
|           |            | 1       | 36        | 19.02                | 18.78                | 19.18                | 0-1                       | 0        |
|           |            | 1       | 74        | 19.15                | 18.76                | 19.29                | 0-1                       | 0        |
|           |            | 36      | 0         | 19.02                | 18.67                | 19.16                | 0-2                       | 0        |
|           |            | 36      | 18        | 19.03                | 18.63                | 19.16                | 0-2                       | 0        |
|           |            | 36      | 39        | 19.03                | 18.62                | 19.09                | 0-2                       | 0        |
|           |            | 75      | 0         | 19.03                | 18.63                | 19.13                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.11                | 18.80                | 19.31                | 0-2                       | 0        |
|           |            | 1       | 36        | 19.03                | 18.71                | 19.17                | 0-2                       | 0        |
|           |            | 1       | 74        | 19.18                | 18.78                | 19.33                | 0-2                       | 0        |
|           |            | 36      | 0         | 19.05                | 18.67                | 19.19                | 0-3                       | 0        |
|           |            | 36      | 18        | 19.05                | 18.65                | 19.13                | 0-3                       | 0        |
|           |            | 36      | 39        | 19.05                | 18.62                | 19.15                | 0-3                       | 0        |
|           |            | 75      | 0         | 18.99                | 18.60                | 19.12                | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.61                | 17.29                | 17.77                | 0-5                       | 1.5      |
|           |            | 1       | 36        | 17.48                | 17.04                | 17.52                | 0-5                       | 1.5      |
|           |            | 1       | 74        | 17.56                | 17.20                | 17.70                | 0-5                       | 1.5      |
|           |            | 36      | 0         | 17.53                | 17.14                | 17.60                | 0-5                       | 1.5      |
|           |            | 36      | 18        | 17.52                | 17.12                | 17.63                | 0-5                       | 1.5      |
|           |            | 36      | 39        | 17.52                | 17.09                | 17.61                | 0-5                       | 1.5      |
|           |            | 75      | 0         | 17.54                | 17.14                | 17.63                | 0-5                       | 1.5      |

## LTE Band 25 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26140 Ch. 1860 MHz  | 26365 Ch. 1882.5 MHz | 26590 Ch. 1905 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 18.95               | 18.68                | 19.09              | 0                         | 0        |
|           |            | 1       | 49        | 18.85               | 18.57                | 19.14              | 0                         | 0        |
|           |            | 1       | 99        | 18.94               | 18.63                | 19.13              | 0                         | 0        |
|           |            | 50      | 0         | 19.01               | 18.72                | 19.16              | 0-1                       | 0        |
|           |            | 50      | 25        | 19.00               | 18.66                | 19.11              | 0-1                       | 0        |
|           |            | 50      | 49        | 19.01               | 18.66                | 19.11              | 0-1                       | 0        |
|           |            | 100     | 0         | 19.01               | 18.66                | 19.14              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.16               | 18.91                | 19.37              | 0-1                       | 0        |
|           |            | 1       | 49        | 18.96               | 18.78                | 19.15              | 0-1                       | 0        |
|           |            | 1       | 99        | 19.13               | 18.81                | 19.33              | 0-1                       | 0        |
|           |            | 50      | 0         | 18.97               | 18.66                | 19.12              | 0-2                       | 0        |
|           |            | 50      | 25        | 18.97               | 18.64                | 19.15              | 0-2                       | 0        |
|           |            | 50      | 49        | 18.94               | 18.64                | 19.12              | 0-2                       | 0        |
|           |            | 100     | 0         | 18.98               | 18.65                | 19.12              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.21               | 18.78                | 19.27              | 0-2                       | 0        |
|           |            | 1       | 49        | 19.08               | 18.71                | 19.19              | 0-2                       | 0        |
|           |            | 1       | 99        | 19.15               | 18.78                | 19.27              | 0-2                       | 0        |
|           |            | 50      | 0         | 18.99               | 18.66                | 19.13              | 0-3                       | 0        |
|           |            | 50      | 25        | 18.99               | 18.64                | 19.15              | 0-3                       | 0        |
|           |            | 50      | 49        | 18.96               | 18.65                | 19.11              | 0-3                       | 0        |
|           |            | 100     | 0         | 18.97               | 18.65                | 19.10              | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 17.48               | 17.26                | 17.95              | 0-5                       | 1.5      |
|           |            | 1       | 49        | 17.55               | 17.12                | 17.59              | 0-5                       | 1.5      |
|           |            | 1       | 99        | 17.48               | 17.34                | 17.74              | 0-5                       | 1.5      |
|           |            | 50      | 0         | 17.48               | 17.13                | 17.61              | 0-5                       | 1.5      |
|           |            | 50      | 25        | 17.47               | 17.11                | 17.58              | 0-5                       | 1.5      |
|           |            | 50      | 49        | 17.48               | 17.13                | 17.60              | 0-5                       | 1.5      |
|           |            | 100     | 0         | 17.48               | 17.12                | 17.64              | 0-5                       | 1.5      |

[ LTE Band 41 Conducted Power ] - Power Class 3  
LTE Band 41 5 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 22.90                | 22.85                | 22.73                | 22.81                | 23.26                | 0                        | 0        |
|            |            | 1       | 12        | 22.91                | 22.92                | 22.73                | 22.83                | 23.29                | 0                        | 0        |
|            |            | 1       | 24        | 22.95                | 22.89                | 22.76                | 22.92                | 23.29                | 0                        | 0        |
|            |            | 12      | 0         | 22.98                | 22.90                | 22.79                | 22.97                | 23.34                | 0-1                      | 0        |
|            |            | 12      | 6         | 22.94                | 22.90                | 22.81                | 22.96                | 23.32                | 0-1                      | 0        |
|            |            | 12      | 11        | 22.95                | 22.90                | 22.80                | 22.97                | 23.33                | 0-1                      | 0        |
|            |            | 25      | 0         | 22.95                | 22.90                | 22.78                | 22.98                | 23.32                | 0-1                      | 0        |
|            | 16QAM      | 1       | 0         | 23.00                | 22.90                | 22.77                | 22.79                | 23.18                | 0-1                      | 0        |
|            |            | 1       | 12        | 22.95                | 22.89                | 22.60                | 22.67                | 23.11                | 0-1                      | 0        |
|            |            | 1       | 24        | 22.98                | 22.86                | 22.68                | 22.76                | 23.12                | 0-1                      | 0        |
|            |            | 12      | 0         | 21.97                | 21.91                | 21.80                | 21.93                | 22.36                | 0-2                      | 1        |
|            |            | 12      | 6         | 21.94                | 21.89                | 21.82                | 21.92                | 22.30                | 0-2                      | 1        |
|            |            | 12      | 11        | 21.94                | 21.92                | 21.83                | 21.95                | 22.32                | 0-2                      | 1        |
|            |            | 25      | 0         | 21.96                | 21.88                | 21.76                | 21.95                | 22.31                | 0-2                      | 1        |
|            | 64QAM      | 1       | 0         | 22.15                | 21.93                | 21.90                | 21.98                | 22.37                | 0-2                      | 1        |
|            |            | 1       | 12        | 22.12                | 21.88                | 21.78                | 21.71                | 22.18                | 0-2                      | 1        |
|            |            | 1       | 24        | 22.16                | 21.94                | 21.85                | 21.93                | 22.30                | 0-2                      | 1        |
|            |            | 12      | 0         | 20.99                | 20.94                | 20.80                | 20.98                | 21.33                | 0-3                      | 2        |
|            |            | 12      | 6         | 20.95                | 20.91                | 20.82                | 20.96                | 21.30                | 0-3                      | 2        |
|            |            | 12      | 11        | 20.98                | 20.91                | 20.84                | 20.99                | 21.31                | 0-3                      | 2        |
|            |            | 25      | 0         | 20.96                | 20.91                | 20.80                | 20.96                | 21.31                | 0-3                      | 2        |
|            | 256QAM     | 1       | 0         | 18.79                | 18.70                | 18.51                | 18.78                | 19.19                | 0-5                      | 3.2      |
|            |            | 1       | 12        | 18.71                | 18.70                | 18.52                | 18.70                | 19.21                | 0-5                      | 3.2      |
|            |            | 1       | 24        | 18.73                | 18.62                | 18.51                | 18.77                | 19.18                | 0-5                      | 3.2      |
|            |            | 12      | 0         | 19.01                | 18.92                | 18.82                | 18.94                | 19.32                | 0-5                      | 3.2      |
|            |            | 12      | 6         | 18.99                | 18.92                | 18.83                | 18.96                | 19.29                | 0-5                      | 3.2      |
|            |            | 12      | 11        | 19.00                | 18.93                | 18.83                | 18.97                | 19.31                | 0-5                      | 3.2      |
|            |            | 25      | 0         | 19.01                | 18.93                | 18.80                | 19.01                | 19.34                | 0-5                      | 3.2      |

**LTE Band 41 10 MHz Bandwidth - Power Class 3**

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 23.31                | 22.93                | 22.84                | 22.92                | 23.30                | 0                         | 0        |
|            |            | 1       | 24        | 23.20                | 22.81                | 22.70                | 22.81                | 23.17                | 0                         | 0        |
|            |            | 1       | 49        | 22.94                | 22.86                | 22.70                | 22.85                | 23.18                | 0                         | 0        |
|            |            | 25      | 0         | 23.01                | 22.92                | 22.81                | 22.94                | 23.28                | 0-1                       | 0        |
|            |            | 25      | 12        | 23.00                | 22.91                | 22.77                | 22.90                | 23.26                | 0-1                       | 0        |
|            |            | 25      | 24        | 22.99                | 22.89                | 22.76                | 22.92                | 23.26                | 0-1                       | 0        |
|            |            | 50      | 0         | 23.02                | 22.94                | 22.81                | 22.96                | 23.35                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 23.06                | 23.07                | 22.90                | 22.89                | 23.20                | 0-1                       | 0        |
|            |            | 1       | 24        | 22.93                | 23.00                | 22.78                | 22.70                | 23.11                | 0-1                       | 0        |
|            |            | 1       | 49        | 23.01                | 23.04                | 22.81                | 22.78                | 23.12                | 0-1                       | 0        |
|            |            | 25      | 0         | 22.01                | 21.92                | 21.82                | 21.99                | 22.34                | 0-2                       | 1        |
|            |            | 25      | 12        | 22.00                | 21.89                | 21.79                | 21.95                | 22.31                | 0-2                       | 1        |
|            |            | 25      | 24        | 21.98                | 21.90                | 21.77                | 21.95                | 22.30                | 0-2                       | 1        |
|            |            | 50      | 0         | 22.03                | 21.94                | 21.80                | 21.96                | 22.31                | 0-2                       | 1        |
|            | 64QAM      | 1       | 0         | 22.17                | 22.12                | 21.96                | 22.09                | 22.38                | 0-2                       | 1        |
|            |            | 1       | 24        | 22.03                | 22.05                | 21.83                | 21.97                | 22.32                | 0-2                       | 1        |
|            |            | 1       | 49        | 22.08                | 22.11                | 21.85                | 22.10                | 22.33                | 0-2                       | 1        |
|            |            | 25      | 0         | 21.01                | 20.94                | 20.84                | 20.97                | 21.33                | 0-3                       | 2        |
|            |            | 25      | 12        | 20.98                | 20.91                | 20.81                | 20.91                | 21.29                | 0-3                       | 2        |
|            |            | 25      | 24        | 20.98                | 20.92                | 20.81                | 20.93                | 21.29                | 0-3                       | 2        |
|            |            | 50      | 0         | 21.05                | 20.98                | 20.85                | 20.99                | 21.35                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 18.90                | 18.90                | 18.81                | 18.87                | 19.23                | 0-5                       | 3.2      |
|            |            | 1       | 24        | 18.76                | 18.78                | 18.70                | 18.75                | 19.09                | 0-5                       | 3.2      |
|            |            | 1       | 49        | 18.82                | 18.85                | 18.75                | 18.82                | 19.16                | 0-5                       | 3.2      |
|            |            | 25      | 0         | 19.05                | 18.99                | 18.89                | 19.00                | 19.33                | 0-5                       | 3.2      |
|            |            | 25      | 12        | 19.03                | 18.95                | 18.81                | 18.94                | 19.31                | 0-5                       | 3.2      |
|            |            | 25      | 24        | 19.03                | 18.98                | 18.85                | 18.97                | 19.32                | 0-5                       | 3.2      |
|            |            | 50      | 0         | 19.09                | 19.02                | 18.89                | 19.04                | 19.37                | 0-5                       | 3.2      |

## LTE Band 41 \_ 15 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 22.97                | 23.10                | 22.98                | 22.99                | 23.26                | 0                         | 0        |
|            |            | 1       | 36        | 23.01                | 23.09                | 22.93                | 22.85                | 23.21                | 0                         | 0        |
|            |            | 1       | 74        | 22.96                | 23.05                | 22.85                | 22.88                | 23.15                | 0                         | 0        |
|            |            | 36      | 0         | 23.05                | 23.14                | 22.99                | 22.99                | 23.31                | 0-1                       | 0        |
|            |            | 36      | 18        | 23.01                | 23.09                | 22.93                | 22.96                | 23.28                | 0-1                       | 0        |
|            |            | 36      | 39        | 23.01                | 23.10                | 22.91                | 22.94                | 23.26                | 0-1                       | 0        |
|            |            | 75      | 0         | 23.02                | 23.11                | 22.94                | 22.96                | 23.27                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 22.98                | 22.99                | 22.81                | 22.94                | 23.19                | 0-1                       | 0        |
|            |            | 1       | 36        | 22.81                | 22.92                | 22.68                | 22.68                | 23.10                | 0-1                       | 0        |
|            |            | 1       | 74        | 22.87                | 22.96                | 22.72                | 22.78                | 23.12                | 0-1                       | 0        |
|            |            | 36      | 0         | 22.05                | 22.12                | 21.93                | 21.93                | 22.31                | 0-2                       | 1        |
|            |            | 36      | 18        | 22.04                | 22.08                | 21.95                | 21.89                | 22.26                | 0-2                       | 1        |
|            |            | 36      | 39        | 22.02                | 22.09                | 21.91                | 21.88                | 22.26                | 0-2                       | 1        |
|            |            | 75      | 0         | 22.06                | 22.11                | 21.96                | 21.92                | 22.27                | 0-2                       | 1        |
|            | 64QAM      | 1       | 0         | 22.21                | 22.11                | 22.09                | 22.08                | 22.39                | 0-2                       | 1        |
|            |            | 1       | 36        | 22.06                | 22.01                | 21.93                | 21.94                | 22.35                | 0-2                       | 1        |
|            |            | 1       | 74        | 22.07                | 22.08                | 21.98                | 21.98                | 22.31                | 0-2                       | 1        |
|            |            | 36      | 0         | 21.13                | 21.14                | 21.00                | 20.96                | 21.33                | 0-3                       | 2        |
|            |            | 36      | 18        | 21.11                | 21.09                | 20.96                | 20.94                | 21.28                | 0-3                       | 2        |
|            |            | 36      | 39        | 21.09                | 21.11                | 20.93                | 20.91                | 21.27                | 0-3                       | 2        |
|            |            | 75      | 0         | 21.12                | 21.14                | 20.98                | 20.95                | 21.30                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 19.04                | 19.17                | 18.89                | 18.87                | 19.19                | 0-5                       | 3.2      |
|            |            | 1       | 36        | 18.82                | 19.16                | 18.79                | 18.66                | 19.10                | 0-5                       | 3.2      |
|            |            | 1       | 74        | 18.94                | 19.15                | 18.78                | 18.77                | 19.15                | 0-5                       | 3.2      |
|            |            | 36      | 0         | 19.19                | 19.16                | 19.05                | 18.99                | 19.35                | 0-5                       | 3.2      |
|            |            | 36      | 18        | 19.16                | 19.12                | 18.99                | 18.95                | 19.32                | 0-5                       | 3.2      |
|            |            | 36      | 39        | 19.14                | 19.14                | 18.97                | 18.93                | 19.32                | 0-5                       | 3.2      |
|            |            | 75      | 0         | 19.12                | 19.12                | 18.99                | 18.93                | 19.29                | 0-5                       | 3.2      |

## LTE Band 41 20 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 23.22                | 23.08                | 23.02                | 23.01                | 23.32                | 0                         | 0        |
|            |            | 1       | 49        | 23.05                | 22.91                | 22.81                | 22.82                | 23.13                | 0                         | 0        |
|            |            | 1       | 99        | 23.10                | 22.96                | 22.81                | 22.85                | 23.14                | 0                         | 0        |
|            |            | 50      | 0         | 23.23                | 23.10                | 23.01                | 23.01                | 23.35                | 0-1                       | 0        |
|            |            | 50      | 25        | 23.17                | 23.06                | 22.94                | 22.94                | 23.37                | 0-1                       | 0        |
|            |            | 50      | 49        | 23.17                | 23.07                | 22.91                | 22.95                | 23.36                | 0-1                       | 0        |
|            |            | 100     | 0         | 23.18                | 23.06                | 22.94                | 22.97                | 23.35                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 23.15                | 23.09                | 22.92                | 22.94                | 23.20                | 0-1                       | 0        |
|            |            | 1       | 49        | 22.93                | 22.93                | 22.69                | 22.72                | 22.97                | 0-1                       | 0        |
|            |            | 1       | 99        | 23.02                | 22.99                | 22.69                | 22.77                | 23.01                | 0-1                       | 0        |
|            |            | 50      | 0         | 22.23                | 22.12                | 22.04                | 22.00                | 22.39                | 0-2                       | 1        |
|            |            | 50      | 25        | 22.16                | 22.07                | 21.95                | 21.92                | 22.34                | 0-2                       | 1        |
|            |            | 50      | 49        | 22.15                | 22.07                | 21.92                | 21.93                | 22.33                | 0-2                       | 1        |
|            |            | 100     | 0         | 22.25                | 22.11                | 21.99                | 22.02                | 22.38                | 0-2                       | 1        |
|            | 64QAM      | 1       | 0         | 22.38                | 22.28                | 22.22                | 22.30                | 22.37                | 0-2                       | 1        |
|            |            | 1       | 49        | 22.20                | 22.09                | 22.03                | 22.14                | 22.28                | 0-2                       | 1        |
|            |            | 1       | 99        | 22.22                | 22.14                | 22.01                | 22.12                | 22.30                | 0-2                       | 1        |
|            |            | 50      | 0         | 21.25                | 21.13                | 21.06                | 21.04                | 21.40                | 0-3                       | 2        |
|            |            | 50      | 25        | 21.18                | 21.09                | 20.97                | 20.98                | 21.36                | 0-3                       | 2        |
|            |            | 50      | 49        | 21.18                | 21.08                | 20.94                | 20.98                | 21.34                | 0-3                       | 2        |
|            |            | 100     | 0         | 21.17                | 21.05                | 20.95                | 21.00                | 21.34                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 19.21                | 19.24                | 19.11                | 18.96                | 19.34                | 0-5                       | 3.2      |
|            |            | 1       | 49        | 19.04                | 19.07                | 18.93                | 18.81                | 19.22                | 0-5                       | 3.2      |
|            |            | 1       | 99        | 19.06                | 19.06                | 18.97                | 18.85                | 19.27                | 0-5                       | 3.2      |
|            |            | 50      | 0         | 19.27                | 19.17                | 19.08                | 19.09                | 19.34                | 0-5                       | 3.2      |
|            |            | 50      | 25        | 19.22                | 19.13                | 19.01                | 19.02                | 19.38                | 0-5                       | 3.2      |
|            |            | 50      | 49        | 19.20                | 19.13                | 18.98                | 19.03                | 19.36                | 0-5                       | 3.2      |
|            |            | 100     | 0         | 19.17                | 19.07                | 18.94                | 19.00                | 19.32                | 0-5                       | 3.2      |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[ LTE Band 41 Conducted Power ] - Power Class 2  
LTE Band 41 5 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 23.04                | 22.92                | 22.83                | 22.79                | 23.17                | 0                        | 0        |
|            |            | 1       | 12        | 22.95                | 22.89                | 22.78                | 22.77                | 23.15                | 0                        | 0        |
|            |            | 1       | 24        | 23.01                | 22.91                | 22.80                | 22.82                | 23.14                | 0                        | 0        |
|            |            | 12      | 0         | 23.00                | 22.91                | 22.80                | 22.81                | 23.13                | 0-1                      | 0        |
|            |            | 12      | 6         | 23.01                | 22.88                | 22.80                | 22.80                | 23.13                | 0-1                      | 0        |
|            |            | 12      | 11        | 23.00                | 22.91                | 22.78                | 22.82                | 23.12                | 0-1                      | 0        |
|            |            | 25      | 0         | 22.99                | 22.90                | 22.77                | 22.80                | 23.15                | 0-1                      | 0        |
|            | 16QAM      | 1       | 0         | 23.38                | 23.22                | 23.16                | 23.00                | 23.38                | 0-1                      | 0        |
|            |            | 1       | 12        | 23.39                | 23.24                | 23.11                | 22.91                | 23.39                | 0-1                      | 0        |
|            |            | 1       | 24        | 23.37                | 23.24                | 23.13                | 22.99                | 23.31                | 0-1                      | 0        |
|            |            | 12      | 0         | 21.98                | 21.92                | 21.86                | 21.85                | 22.19                | 0-2                      | 0        |
|            |            | 12      | 6         | 22.08                | 21.90                | 21.84                | 21.79                | 22.17                | 0-2                      | 0        |
|            |            | 12      | 11        | 22.11                | 21.90                | 21.81                | 21.78                | 22.18                | 0-2                      | 0        |
|            |            | 25      | 0         | 21.97                | 21.89                | 21.81                | 21.79                | 22.18                | 0-2                      | 0        |
|            | 64QAM      | 1       | 0         | 22.45                | 22.28                | 22.04                | 22.03                | 22.53                | 0-2                      | 0        |
|            |            | 1       | 12        | 22.37                | 22.07                | 21.83                | 22.06                | 22.51                | 0-2                      | 0        |
|            |            | 1       | 24        | 22.48                | 22.30                | 22.06                | 22.07                | 22.54                | 0-2                      | 0        |
|            |            | 12      | 0         | 20.93                | 20.97                | 20.87                | 20.81                | 21.07                | 0-3                      | 2        |
|            |            | 12      | 6         | 21.04                | 20.95                | 20.72                | 20.81                | 21.22                | 0-3                      | 2        |
|            |            | 12      | 11        | 21.03                | 20.95                | 20.69                | 20.83                | 21.21                | 0-3                      | 2        |
|            |            | 25      | 0         | 21.01                | 20.91                | 20.79                | 20.73                | 21.13                | 0-3                      | 2        |
|            | 256QAM     | 1       | 0         | 18.75                | 18.77                | 18.58                | 18.38                | 18.96                | 0-5                      | 2.7      |
|            |            | 1       | 12        | 18.78                | 18.82                | 18.54                | 18.33                | 18.96                | 0-5                      | 2.7      |
|            |            | 1       | 24        | 18.79                | 18.77                | 18.51                | 18.43                | 18.97                | 0-5                      | 2.7      |
|            |            | 12      | 0         | 19.06                | 18.88                | 18.85                | 18.87                | 19.16                | 0-5                      | 2.7      |
|            |            | 12      | 6         | 19.04                | 18.84                | 18.78                | 18.83                | 19.12                | 0-5                      | 2.7      |
|            |            | 12      | 11        | 18.99                | 18.84                | 18.77                | 18.81                | 19.15                | 0-5                      | 2.7      |
|            |            | 25      | 0         | 19.05                | 18.92                | 18.83                | 18.82                | 19.18                | 0-5                      | 2.7      |

## LTE Band 41 10 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 23.05                | 22.96                | 22.89                | 22.89                | 23.20                | 0                         | 0        |
|            |            | 1       | 24        | 23.03                | 22.92                | 22.80                | 22.84                | 23.15                | 0                         | 0        |
|            |            | 1       | 49        | 23.04                | 22.92                | 22.81                | 22.83                | 23.15                | 0                         | 0        |
|            |            | 25      | 0         | 23.02                | 22.91                | 22.82                | 22.83                | 23.18                | 0-1                       | 0        |
|            |            | 25      | 12        | 23.00                | 22.89                | 22.79                | 22.80                | 23.14                | 0-1                       | 0        |
|            |            | 25      | 24        | 22.98                | 22.88                | 22.77                | 22.77                | 23.14                | 0-1                       | 0        |
|            |            | 50      | 0         | 22.95                | 22.88                | 22.77                | 22.79                | 23.11                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 22.87                | 23.32                | 23.21                | 22.87                | 23.38                | 0-1                       | 0        |
|            |            | 1       | 24        | 22.67                | 23.21                | 23.08                | 22.73                | 23.36                | 0-1                       | 0        |
|            |            | 1       | 49        | 22.76                | 23.23                | 23.11                | 22.79                | 23.37                | 0-1                       | 0        |
|            |            | 25      | 0         | 22.04                | 21.90                | 21.81                | 21.82                | 22.18                | 0-2                       | 0        |
|            |            | 25      | 12        | 22.04                | 21.90                | 21.78                | 21.84                | 22.16                | 0-2                       | 0        |
|            |            | 25      | 24        | 21.99                | 21.87                | 21.75                | 21.81                | 22.14                | 0-2                       | 0        |
|            |            | 50      | 0         | 21.95                | 21.93                | 21.78                | 21.79                | 22.13                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 22.53                | 22.30                | 22.23                | 22.04                | 22.60                | 0-2                       | 0        |
|            |            | 1       | 24        | 22.48                | 22.27                | 22.18                | 22.31                | 22.55                | 0-2                       | 0        |
|            |            | 1       | 49        | 22.42                | 22.24                | 22.13                | 22.24                | 22.51                | 0-2                       | 0        |
|            |            | 25      | 0         | 21.05                | 20.94                | 20.85                | 20.83                | 21.22                | 0-3                       | 2        |
|            |            | 25      | 12        | 20.98                | 20.92                | 20.82                | 20.82                | 21.20                | 0-3                       | 2        |
|            |            | 25      | 24        | 20.94                | 20.91                | 20.80                | 20.79                | 21.20                | 0-3                       | 2        |
|            |            | 50      | 0         | 21.02                | 20.95                | 20.84                | 20.82                | 21.20                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 18.62                | 19.00                | 18.95                | 18.47                | 18.88                | 0-5                       | 2.7      |
|            |            | 1       | 24        | 18.62                | 19.01                | 18.91                | 18.38                | 19.26                | 0-5                       | 2.7      |
|            |            | 1       | 49        | 18.64                | 19.03                | 18.91                | 18.39                | 19.29                | 0-5                       | 2.7      |
|            |            | 25      | 0         | 19.08                | 18.99                | 18.87                | 18.86                | 19.24                | 0-5                       | 2.7      |
|            |            | 25      | 12        | 19.07                | 18.95                | 18.85                | 18.85                | 19.20                | 0-5                       | 2.7      |
|            |            | 25      | 24        | 19.04                | 18.94                | 18.84                | 18.82                | 19.20                | 0-5                       | 2.7      |
|            |            | 50      | 0         | 19.05                | 18.98                | 18.88                | 18.85                | 19.24                | 0-5                       | 2.7      |

## LTE Band 41 \_ 15 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 23.09                | 23.03                | 22.94                | 22.81                | 23.21                | 0                         | 0        |
|            |            | 1       | 36        | 22.98                | 22.94                | 22.77                | 22.66                | 23.12                | 0                         | 0        |
|            |            | 1       | 74        | 23.07                | 22.97                | 22.81                | 22.75                | 23.12                | 0                         | 0        |
|            |            | 36      | 0         | 23.03                | 22.95                | 22.84                | 22.79                | 23.14                | 0-1                       | 0        |
|            |            | 36      | 18        | 23.01                | 22.93                | 22.80                | 22.79                | 23.10                | 0-1                       | 0        |
|            |            | 36      | 39        | 22.97                | 22.92                | 22.76                | 22.74                | 23.08                | 0-1                       | 0        |
|            |            | 75      | 0         | 23.01                | 22.92                | 22.79                | 22.76                | 23.12                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 23.07                | 23.20                | 23.09                | 22.96                | 23.39                | 0-1                       | 0        |
|            |            | 1       | 36        | 22.85                | 23.12                | 22.94                | 22.60                | 23.18                | 0-1                       | 0        |
|            |            | 1       | 74        | 23.07                | 23.12                | 22.98                | 22.76                | 23.11                | 0-1                       | 0        |
|            |            | 36      | 0         | 22.04                | 21.92                | 21.88                | 21.73                | 22.16                | 0-2                       | 0        |
|            |            | 36      | 18        | 22.03                | 21.89                | 21.85                | 21.73                | 22.08                | 0-2                       | 0        |
|            |            | 36      | 39        | 21.97                | 21.88                | 21.81                | 21.68                | 22.09                | 0-2                       | 0        |
|            |            | 75      | 0         | 22.05                | 21.96                | 21.83                | 21.76                | 22.15                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 22.62                | 22.52                | 22.12                | 22.22                | 22.70                | 0-2                       | 0        |
|            |            | 1       | 36        | 22.52                | 22.47                | 21.99                | 22.06                | 22.69                | 0-2                       | 0        |
|            |            | 1       | 74        | 22.54                | 22.48                | 22.02                | 22.14                | 22.66                | 0-2                       | 0        |
|            |            | 36      | 0         | 21.01                | 20.94                | 20.86                | 20.80                | 21.13                | 0-3                       | 2        |
|            |            | 36      | 18        | 21.01                | 20.91                | 20.81                | 20.75                | 21.10                | 0-3                       | 2        |
|            |            | 36      | 39        | 20.96                | 20.90                | 20.78                | 20.70                | 21.08                | 0-3                       | 2        |
|            |            | 75      | 0         | 21.02                | 20.96                | 20.82                | 20.78                | 21.14                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 18.73                | 18.80                | 18.82                | 18.78                | 19.26                | 0-5                       | 2.7      |
|            |            | 1       | 36        | 18.63                | 18.75                | 18.67                | 18.61                | 19.19                | 0-5                       | 2.7      |
|            |            | 1       | 74        | 18.67                | 18.76                | 18.70                | 18.71                | 19.22                | 0-5                       | 2.7      |
|            |            | 36      | 0         | 19.06                | 18.99                | 18.88                | 18.82                | 19.18                | 0-5                       | 2.7      |
|            |            | 36      | 18        | 19.06                | 18.97                | 18.85                | 18.82                | 19.17                | 0-5                       | 2.7      |
|            |            | 36      | 39        | 19.01                | 18.96                | 18.81                | 18.78                | 19.16                | 0-5                       | 2.7      |
|            |            | 75      | 0         | 19.03                | 18.98                | 18.84                | 18.79                | 19.15                | 0-5                       | 2.7      |

**LTE Band 41 20 MHz Bandwidth - Power Class 2**

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 23.15                | 23.06                | 22.99                | 22.89                | 23.23                | 0                         | 0        |
|            |            | 1       | 49        | 22.99                | 22.96                | 22.82                | 22.73                | 23.11                | 0                         | 0        |
|            |            | 1       | 99        | 23.03                | 22.96                | 22.80                | 22.77                | 23.07                | 0                         | 0        |
|            |            | 50      | 0         | 22.98                | 22.93                | 22.83                | 22.79                | 23.11                | 0-1                       | 0        |
|            |            | 50      | 25        | 22.92                | 22.87                | 22.76                | 22.73                | 23.04                | 0-1                       | 0        |
|            |            | 50      | 49        | 22.91                | 22.87                | 22.71                | 22.72                | 23.03                | 0-1                       | 0        |
|            |            | 100     | 0         | 22.99                | 22.93                | 22.79                | 22.77                | 23.10                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 23.33                | 23.38                | 23.32                | 23.34                | 23.35                | 0-1                       | 0        |
|            |            | 1       | 49        | 22.85                | 23.23                | 23.12                | 23.05                | 23.39                | 0-1                       | 0        |
|            |            | 1       | 99        | 23.02                | 23.27                | 23.12                | 23.18                | 23.38                | 0-1                       | 0        |
|            |            | 50      | 0         | 22.01                | 21.97                | 21.87                | 21.79                | 22.13                | 0-2                       | 0        |
|            |            | 50      | 25        | 21.94                | 21.87                | 21.77                | 21.74                | 22.07                | 0-2                       | 0        |
|            |            | 50      | 49        | 21.93                | 21.86                | 21.72                | 21.70                | 22.03                | 0-2                       | 0        |
|            |            | 100     | 0         | 22.03                | 21.98                | 21.86                | 21.82                | 22.16                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 22.72                | 22.44                | 22.37                | 22.42                | 22.63                | 0-2                       | 0        |
|            |            | 1       | 49        | 22.60                | 22.32                | 22.23                | 22.26                | 22.50                | 0-2                       | 0        |
|            |            | 1       | 99        | 22.56                | 22.31                | 22.18                | 22.23                | 22.46                | 0-2                       | 0        |
|            |            | 50      | 0         | 21.06                | 20.99                | 20.90                | 20.85                | 21.21                | 0-3                       | 2        |
|            |            | 50      | 25        | 21.00                | 20.95                | 20.85                | 20.79                | 21.15                | 0-3                       | 2        |
|            |            | 50      | 49        | 20.97                | 20.93                | 20.78                | 20.77                | 21.14                | 0-3                       | 2        |
|            |            | 100     | 0         | 21.01                | 20.96                | 20.82                | 20.77                | 21.14                | 0-3                       | 2        |
|            | 256QAM     | 1       | 0         | 19.12                | 18.64                | 19.12                | 19.07                | 19.35                | 0-5                       | 2.7      |
|            |            | 1       | 49        | 19.01                | 19.11                | 18.99                | 18.90                | 19.27                | 0-5                       | 2.7      |
|            |            | 1       | 99        | 18.98                | 19.14                | 18.95                | 18.95                | 19.29                | 0-5                       | 2.7      |
|            |            | 50      | 0         | 19.10                | 19.06                | 18.95                | 18.87                | 19.21                | 0-5                       | 2.7      |
|            |            | 50      | 25        | 19.05                | 18.99                | 18.89                | 18.83                | 19.17                | 0-5                       | 2.7      |
|            |            | 50      | 49        | 19.02                | 18.98                | 18.82                | 18.79                | 19.16                | 0-5                       | 2.7      |
|            |            | 100     | 0         | 19.01                | 18.97                | 18.83                | 18.79                | 19.14                | 0-5                       | 2.7      |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

[LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]      |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 131979 Ch.<br>1710.7 MHz | 132322 Ch.<br>1745 MHz | 132665 Ch.<br>1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.03                    | 19.38                  | 19.71                    | 0                         | 0        |
|           |            | 1       | 3         | 20.06                    | 19.37                  | 19.76                    | 0                         | 0        |
|           |            | 1       | 5         | 20.07                    | 19.38                  | 19.70                    | 0                         | 0        |
|           |            | 3       | 0         | 20.02                    | 19.34                  | 19.67                    | 0                         | 0        |
|           |            | 3       | 1         | 20.23                    | 19.43                  | 19.84                    | 0                         | 0        |
|           |            | 3       | 3         | 20.11                    | 19.46                  | 19.71                    | 0                         | 0        |
|           |            | 6       | 0         | 20.06                    | 19.39                  | 19.71                    | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.32                    | 19.57                  | 19.96                    | 0-1                       | 0        |
|           |            | 1       | 3         | 20.16                    | 19.47                  | 19.81                    | 0-1                       | 0        |
|           |            | 1       | 5         | 20.23                    | 19.63                  | 19.95                    | 0-1                       | 0        |
|           |            | 3       | 0         | 20.14                    | 19.48                  | 19.84                    | 0-1                       | 0        |
|           |            | 3       | 1         | 20.34                    | 19.59                  | 19.94                    | 0-1                       | 0        |
|           |            | 3       | 3         | 20.15                    | 19.52                  | 19.88                    | 0-1                       | 0        |
|           |            | 6       | 0         | 20.13                    | 19.45                  | 19.86                    | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.17                    | 19.46                  | 19.91                    | 0-2                       | 0        |
|           |            | 1       | 3         | 20.21                    | 19.40                  | 19.75                    | 0-2                       | 0        |
|           |            | 1       | 5         | 20.30                    | 19.51                  | 19.93                    | 0-2                       | 0        |
|           |            | 3       | 0         | 20.14                    | 19.41                  | 19.80                    | 0-2                       | 0        |
|           |            | 3       | 1         | 20.19                    | 19.49                  | 19.98                    | 0-2                       | 0        |
|           |            | 3       | 3         | 20.17                    | 19.54                  | 19.83                    | 0-2                       | 0        |
|           |            | 6       | 0         | 20.19                    | 19.43                  | 19.81                    | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.18                    | 17.46                  | 17.77                    | 0-5                       | 1.8      |
|           |            | 1       | 3         | 18.17                    | 17.40                  | 17.67                    | 0-5                       | 1.8      |
|           |            | 1       | 5         | 18.17                    | 17.59                  | 17.88                    | 0-5                       | 1.8      |
|           |            | 3       | 0         | 18.10                    | 17.34                  | 17.64                    | 0-5                       | 1.8      |
|           |            | 3       | 1         | 18.13                    | 17.45                  | 17.76                    | 0-5                       | 1.8      |
|           |            | 3       | 3         | 18.15                    | 17.53                  | 17.83                    | 0-5                       | 1.8      |
|           |            | 6       | 0         | 18.13                    | 17.36                  | 17.69                    | 0-5                       | 1.8      |

## LTE Band 66 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131987 Ch. 1711.5 MHz | 132322 Ch. 1745 MHz | 132657 Ch. 1778.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 20.03                 | 19.34               | 19.74                 | 0                         | 0        |
|           |            | 1       | 7         | 19.99                 | 19.28               | 19.63                 | 0                         | 0        |
|           |            | 1       | 14        | 20.08                 | 19.41               | 19.77                 | 0                         | 0        |
|           |            | 8       | 0         | 20.14                 | 19.42               | 19.81                 | 0-1                       | 0        |
|           |            | 8       | 3         | 20.14                 | 19.44               | 19.77                 | 0-1                       | 0        |
|           |            | 8       | 7         | 20.16                 | 19.46               | 19.82                 | 0-1                       | 0        |
|           |            | 15      | 0         | 20.17                 | 19.48               | 19.82                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.25                 | 19.65               | 19.88                 | 0-1                       | 0        |
|           |            | 1       | 7         | 20.13                 | 19.54               | 19.89                 | 0-1                       | 0        |
|           |            | 1       | 14        | 20.22                 | 19.56               | 19.97                 | 0-1                       | 0        |
|           |            | 8       | 0         | 20.21                 | 19.48               | 19.82                 | 0-2                       | 0        |
|           |            | 8       | 3         | 20.20                 | 19.47               | 19.85                 | 0-2                       | 0        |
|           |            | 8       | 7         | 20.21                 | 19.50               | 19.91                 | 0-2                       | 0        |
|           |            | 15      | 0         | 20.21                 | 19.45               | 19.81                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.25                 | 19.53               | 19.98                 | 0-2                       | 0        |
|           |            | 1       | 7         | 20.17                 | 19.48               | 19.78                 | 0-2                       | 0        |
|           |            | 1       | 14        | 20.21                 | 19.54               | 19.91                 | 0-2                       | 0        |
|           |            | 8       | 0         | 20.16                 | 19.40               | 19.84                 | 0-3                       | 0        |
|           |            | 8       | 3         | 20.17                 | 19.47               | 19.84                 | 0-3                       | 0        |
|           |            | 8       | 7         | 20.18                 | 19.46               | 19.82                 | 0-3                       | 0        |
|           |            | 15      | 0         | 20.15                 | 19.50               | 19.89                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.15                 | 17.44               | 17.71                 | 0-5                       | 1.8      |
|           |            | 1       | 7         | 18.19                 | 17.41               | 17.71                 | 0-5                       | 1.8      |
|           |            | 1       | 14        | 18.18                 | 17.47               | 17.76                 | 0-5                       | 1.8      |
|           |            | 8       | 0         | 18.12                 | 17.39               | 17.69                 | 0-5                       | 1.8      |
|           |            | 8       | 3         | 18.12                 | 17.32               | 17.70                 | 0-5                       | 1.8      |
|           |            | 8       | 7         | 18.16                 | 17.36               | 17.67                 | 0-5                       | 1.8      |
|           |            | 15      | 0         | 18.17                 | 17.36               | 17.69                 | 0-5                       | 1.8      |

## LTE Band 66 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                    |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|--------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131997 Ch. 1712.5 MHz | 132322Ch. 1745 MHz | 132647 Ch. 1777.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.01                 | 19.39              | 19.70                 | 0                         | 0        |
|           |            | 1       | 12        | 19.97                 | 19.33              | 19.60                 | 0                         | 0        |
|           |            | 1       | 24        | 20.03                 | 19.44              | 19.73                 | 0                         | 0        |
|           |            | 12      | 0         | 20.15                 | 19.51              | 19.78                 | 0-1                       | 0        |
|           |            | 12      | 6         | 20.10                 | 19.51              | 19.78                 | 0-1                       | 0        |
|           |            | 12      | 11        | 20.10                 | 19.52              | 19.80                 | 0-1                       | 0        |
|           |            | 25      | 0         | 20.12                 | 19.46              | 19.78                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.21                 | 19.51              | 19.79                 | 0-1                       | 0        |
|           |            | 1       | 12        | 20.23                 | 19.65              | 19.91                 | 0-1                       | 0        |
|           |            | 1       | 24        | 20.29                 | 19.61              | 19.99                 | 0-1                       | 0        |
|           |            | 12      | 0         | 20.15                 | 19.49              | 19.80                 | 0-2                       | 0        |
|           |            | 12      | 6         | 20.16                 | 19.50              | 19.83                 | 0-2                       | 0        |
|           |            | 12      | 11        | 20.16                 | 19.43              | 19.79                 | 0-2                       | 0        |
|           |            | 25      | 0         | 20.16                 | 19.52              | 19.82                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.29                 | 19.55              | 19.82                 | 0-2                       | 0        |
|           |            | 1       | 12        | 20.24                 | 19.54              | 19.93                 | 0-2                       | 0        |
|           |            | 1       | 24        | 20.25                 | 19.56              | 19.99                 | 0-2                       | 0        |
|           |            | 12      | 0         | 20.15                 | 19.51              | 19.82                 | 0-3                       | 0        |
|           |            | 12      | 6         | 20.12                 | 19.48              | 19.81                 | 0-3                       | 0        |
|           |            | 12      | 11        | 20.11                 | 19.44              | 19.80                 | 0-3                       | 0        |
|           |            | 25      | 0         | 20.14                 | 19.44              | 19.81                 | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.17                 | 17.48              | 17.71                 | 0-5                       | 1.8      |
|           |            | 1       | 12        | 18.09                 | 17.51              | 17.64                 | 0-5                       | 1.8      |
|           |            | 1       | 24        | 18.16                 | 17.55              | 17.71                 | 0-5                       | 1.8      |
|           |            | 12      | 0         | 18.08                 | 17.46              | 17.71                 | 0-5                       | 1.8      |
|           |            | 12      | 6         | 18.07                 | 17.42              | 17.67                 | 0-5                       | 1.8      |
|           |            | 12      | 11        | 18.07                 | 17.40              | 17.70                 | 0-5                       | 1.8      |
|           |            | 25      | 0         | 18.09                 | 17.43              | 17.74                 | 0-5                       | 1.8      |

## LTE Band 66 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]    |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 132022 Ch.<br>1715 MHz | 132322 Ch.<br>1745 MHz | 132622 Ch.<br>1775 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.06                  | 19.43                  | 19.68                  | 0                         | 0        |
|           |            | 1       | 24        | 20.01                  | 19.40                  | 19.67                  | 0                         | 0        |
|           |            | 1       | 49        | 20.06                  | 19.46                  | 19.76                  | 0                         | 0        |
|           |            | 25      | 0         | 20.14                  | 19.48                  | 19.77                  | 0-1                       | 0        |
|           |            | 25      | 12        | 20.11                  | 19.48                  | 19.75                  | 0-1                       | 0        |
|           |            | 25      | 24        | 20.12                  | 19.48                  | 19.71                  | 0-1                       | 0        |
|           |            | 50      | 0         | 20.14                  | 19.45                  | 19.71                  | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.27                  | 19.67                  | 19.86                  | 0-1                       | 0        |
|           |            | 1       | 24        | 20.17                  | 19.54                  | 19.88                  | 0-1                       | 0        |
|           |            | 1       | 49        | 20.24                  | 19.60                  | 20.02                  | 0-1                       | 0        |
|           |            | 25      | 0         | 20.15                  | 19.48                  | 19.78                  | 0-2                       | 0        |
|           |            | 25      | 12        | 20.11                  | 19.46                  | 19.74                  | 0-2                       | 0        |
|           |            | 25      | 24        | 20.11                  | 19.49                  | 19.83                  | 0-2                       | 0        |
|           |            | 50      | 0         | 20.13                  | 19.49                  | 19.75                  | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.18                  | 19.67                  | 19.85                  | 0-2                       | 0        |
|           |            | 1       | 24        | 20.16                  | 19.55                  | 19.82                  | 0-2                       | 0        |
|           |            | 1       | 49        | 20.21                  | 19.58                  | 19.97                  | 0-2                       | 0        |
|           |            | 25      | 0         | 20.10                  | 19.46                  | 19.76                  | 0-3                       | 0        |
|           |            | 25      | 12        | 20.07                  | 19.44                  | 19.75                  | 0-3                       | 0        |
|           |            | 25      | 24        | 20.04                  | 19.44                  | 19.76                  | 0-3                       | 0        |
|           |            | 50      | 0         | 20.08                  | 19.51                  | 19.77                  | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.14                  | 17.52                  | 17.80                  | 0-5                       | 1.8      |
|           |            | 1       | 24        | 18.08                  | 17.48                  | 17.77                  | 0-5                       | 1.8      |
|           |            | 1       | 49        | 18.18                  | 17.59                  | 17.87                  | 0-5                       | 1.8      |
|           |            | 25      | 0         | 18.06                  | 17.42                  | 17.66                  | 0-5                       | 1.8      |
|           |            | 25      | 12        | 18.03                  | 17.40                  | 17.65                  | 0-5                       | 1.8      |
|           |            | 25      | 24        | 18.08                  | 17.41                  | 17.67                  | 0-5                       | 1.8      |
|           |            | 50      | 0         | 18.08                  | 17.47                  | 17.75                  | 0-5                       | 1.8      |

## LTE Band 66 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]      |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 132047 Ch.<br>1717.5 MHz | 132322 Ch.<br>1745 MHz | 132597 Ch.<br>1772.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 19.97                    | 19.46                  | 19.70                    | 0                         | 0        |
|           |            | 1       | 36        | 19.82                    | 19.36                  | 19.56                    | 0                         | 0        |
|           |            | 1       | 74        | 20.01                    | 19.50                  | 19.72                    | 0                         | 0        |
|           |            | 36      | 0         | 20.02                    | 19.45                  | 19.67                    | 0-1                       | 0        |
|           |            | 36      | 18        | 20.03                    | 19.48                  | 19.66                    | 0-1                       | 0        |
|           |            | 36      | 39        | 20.05                    | 19.45                  | 19.66                    | 0-1                       | 0        |
|           |            | 75      | 0         | 20.03                    | 19.44                  | 19.64                    | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.31                    | 19.73                  | 19.96                    | 0-1                       | 0        |
|           |            | 1       | 36        | 20.21                    | 19.59                  | 19.77                    | 0-1                       | 0        |
|           |            | 1       | 74        | 20.37                    | 19.71                  | 20.03                    | 0-1                       | 0        |
|           |            | 36      | 0         | 20.04                    | 19.44                  | 19.64                    | 0-2                       | 0        |
|           |            | 36      | 18        | 20.03                    | 19.48                  | 19.69                    | 0-2                       | 0        |
|           |            | 36      | 39        | 20.06                    | 19.48                  | 19.70                    | 0-2                       | 0        |
|           |            | 75      | 0         | 20.04                    | 19.46                  | 19.69                    | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.12                    | 19.55                  | 19.90                    | 0-2                       | 0        |
|           |            | 1       | 36        | 19.92                    | 19.49                  | 19.67                    | 0-2                       | 0        |
|           |            | 1       | 74        | 20.15                    | 19.69                  | 19.88                    | 0-2                       | 0        |
|           |            | 36      | 0         | 20.01                    | 19.47                  | 19.70                    | 0-3                       | 0        |
|           |            | 36      | 18        | 20.02                    | 19.49                  | 19.71                    | 0-3                       | 0        |
|           |            | 36      | 39        | 20.02                    | 19.51                  | 19.74                    | 0-3                       | 0        |
|           |            | 75      | 0         | 20.04                    | 19.49                  | 19.72                    | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.06                    | 17.54                  | 17.74                    | 0-5                       | 1.8      |
|           |            | 1       | 36        | 17.95                    | 17.26                  | 17.55                    | 0-5                       | 1.8      |
|           |            | 1       | 74        | 18.23                    | 17.56                  | 17.74                    | 0-5                       | 1.8      |
|           |            | 36      | 0         | 17.98                    | 17.42                  | 17.62                    | 0-5                       | 1.8      |
|           |            | 36      | 18        | 17.95                    | 17.47                  | 17.67                    | 0-5                       | 1.8      |
|           |            | 36      | 39        | 18.03                    | 17.44                  | 17.66                    | 0-5                       | 1.8      |
|           |            | 75      | 0         | 18.01                    | 17.49                  | 17.66                    | 0-5                       | 1.8      |

## LTE Band 66 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]    |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 132072 Ch.<br>1720 MHz | 132322 Ch.<br>1745 MHz | 132572 Ch.<br>1770 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.88                  | 19.43                  | 19.67                  | 0                         | 0        |
|           |            | 1       | 49        | 19.90                  | 19.44                  | 19.65                  | 0                         | 0        |
|           |            | 1       | 99        | 20.02                  | 19.42                  | 19.71                  | 0                         | 0        |
|           |            | 50      | 0         | 20.00                  | 19.43                  | 19.63                  | 0-1                       | 0        |
|           |            | 50      | 25        | 19.96                  | 19.44                  | 19.66                  | 0-1                       | 0        |
|           |            | 50      | 49        | 20.01                  | 19.50                  | 19.67                  | 0-1                       | 0        |
|           |            | 100     | 0         | 19.95                  | 19.42                  | 19.66                  | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.24                  | 19.75                  | 20.04                  | 0-1                       | 0        |
|           |            | 1       | 49        | 20.09                  | 19.58                  | 19.84                  | 0-1                       | 0        |
|           |            | 1       | 99        | 20.31                  | 19.73                  | 19.96                  | 0-1                       | 0        |
|           |            | 50      | 0         | 19.95                  | 19.49                  | 19.67                  | 0-2                       | 0        |
|           |            | 50      | 25        | 19.98                  | 19.46                  | 19.66                  | 0-2                       | 0        |
|           |            | 50      | 49        | 19.97                  | 19.50                  | 19.70                  | 0-2                       | 0        |
|           |            | 100     | 0         | 19.94                  | 19.43                  | 19.69                  | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.28                  | 19.60                  | 19.88                  | 0-2                       | 0        |
|           |            | 1       | 49        | 20.08                  | 19.72                  | 19.76                  | 0-2                       | 0        |
|           |            | 1       | 99        | 20.40                  | 19.76                  | 19.97                  | 0-2                       | 0        |
|           |            | 50      | 0         | 19.99                  | 19.48                  | 19.66                  | 0-3                       | 0        |
|           |            | 50      | 25        | 19.96                  | 19.48                  | 19.69                  | 0-3                       | 0        |
|           |            | 50      | 49        | 19.99                  | 19.52                  | 19.73                  | 0-3                       | 0        |
|           |            | 100     | 0         | 19.92                  | 19.45                  | 19.66                  | 0-3                       | 0        |
|           | 256QAM     | 1       | 0         | 18.12                  | 17.59                  | 17.78                  | 0-5                       | 1.8      |
|           |            | 1       | 49        | 18.04                  | 17.53                  | 17.78                  | 0-5                       | 1.8      |
|           |            | 1       | 99        | 18.09                  | 17.55                  | 17.92                  | 0-5                       | 1.8      |
|           |            | 50      | 0         | 17.95                  | 17.45                  | 17.70                  | 0-5                       | 1.8      |
|           |            | 50      | 25        | 17.94                  | 17.48                  | 17.69                  | 0-5                       | 1.8      |
|           |            | 50      | 49        | 17.99                  | 17.48                  | 17.70                  | 0-5                       | 1.8      |
|           |            | 100     | 0         | 17.95                  | 17.49                  | 17.67                  | 0-5                       | 1.8      |

Note : The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

## 11.4 WIFI Conducted Power measurement method

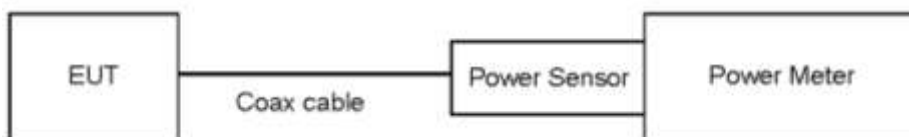
### Un-Licensed bands (DTS Band)

| Test Description       | Test Procedure Used                                                        |
|------------------------|----------------------------------------------------------------------------|
| Conducted Output Power | - KDB 558074 v05 - Section 8.3.2.3<br>- ANSI 63.10-2013 - Section 11.9.2.3 |

#### Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add  $10 \log(1/x)$ , where  $x$  is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

#### Test setup



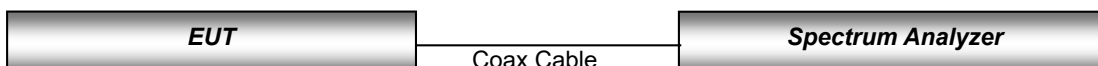
### Un-Licensed bands (NII Band)

| Test Description       | Test Procedure Used                     |
|------------------------|-----------------------------------------|
| Conducted Output Power | - KDB 789033 D02 v02r01 - Section E.3.a |

#### Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add  $10 \log(1/x)$ , where  $x$  is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

#### Test setup



#### 11.4.1 IEEE 802.11 (2.4 GHz) Maximum Conducted Power

| Mode           | Frequency [MHz] | Channel | IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm] |       |       |
|----------------|-----------------|---------|--------------------------------------------------------|-------|-------|
|                |                 |         | Ant.1                                                  | Ant.2 | MIMO  |
| 802.11b        | 2 412           | 1       | 19.05                                                  | 19.44 |       |
|                | 2 437           | 6       | 18.77                                                  | 19.06 |       |
|                | 2 462           | 11      | 18.96                                                  | 19.45 |       |
|                | 2 467           | 12      | 9.05                                                   | 9.01  |       |
|                | 2 472           | 13      | 5.35                                                   | 5.21  |       |
| 802.11g        | 2 412           | 1       | 15.46                                                  | 15.20 | 18.35 |
|                | 2 437           | 6       | 16.81                                                  | 16.61 | 19.72 |
|                | 2 462           | 11      | 15.39                                                  | 15.19 | 18.30 |
|                | 2 467           | 12      | 10.13                                                  | 10.11 | 13.13 |
|                | 2 472           | 13      | 6.74                                                   | 6.44  | 9.60  |
| 802.11n (HT20) | 2 412           | 1       | 14.32                                                  | 14.16 | 17.25 |
|                | 2 437           | 6       | 16.83                                                  | 16.34 | 19.60 |
|                | 2 462           | 11      | 14.29                                                  | 14.03 | 17.17 |
|                | 2 467           | 12      | 10.08                                                  | 10.15 | 13.13 |
|                | 2 472           | 13      | 6.83                                                   | 6.53  | 9.69  |
| 802.11ax(SU)   | 2 412           | 1       | 14.19                                                  | 13.89 | 17.05 |
|                | 2 437           | 6       | 15.52                                                  | 15.80 | 18.67 |
|                | 2 462           | 11      | 13.18                                                  | 13.28 | 16.24 |
|                | 2 467           | 12      | 10.22                                                  | 9.94  | 13.09 |
|                | 2 472           | 13      | 6.90                                                   | 6.72  | 9.82  |

#### 11.4.2 IEEE 802.11 (2.4 GHz) Conducted Power (Power Back-off when triggered by RCV, or RSDB only)

| Mode           | Frequency [MHz] | Channel | IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm] |       |       |
|----------------|-----------------|---------|--------------------------------------------------------|-------|-------|
|                |                 |         | Ant.1                                                  | Ant.2 | MIMO  |
| 802.11b        | 2 412           | 1       | 15.67                                                  | 16.02 |       |
|                | 2 437           | 6       | 15.61                                                  | 15.55 |       |
|                | 2 462           | 11      | 15.64                                                  | 15.65 |       |
|                | 2 467           | 12      | 9.85                                                   | 9.88  |       |
|                | 2 472           | 13      | 6.19                                                   | 5.91  |       |
| 802.11g        | 2 412           | 1       | 14.38                                                  | 14.27 | 17.34 |
|                | 2 437           | 6       | 15.15                                                  | 14.94 | 18.06 |
|                | 2 462           | 11      | 14.23                                                  | 14.28 | 17.27 |
|                | 2 467           | 12      | 9.61                                                   | 9.22  | 12.43 |
|                | 2 472           | 13      | 5.79                                                   | 5.18  | 8.51  |
| 802.11n (HT20) | 2 412           | 1       | 13.42                                                  | 13.39 | 16.42 |
|                | 2 437           | 6       | 14.94                                                  | 14.82 | 17.89 |
|                | 2 462           | 11      | 13.34                                                  | 13.41 | 16.39 |
|                | 2 467           | 12      | 9.70                                                   | 9.57  | 12.65 |
|                | 2 472           | 13      | 5.80                                                   | 5.33  | 8.58  |
| 802.11ax(SU)   | 2 412           | 1       | 14.10                                                  | 13.86 | 16.99 |
|                | 2 437           | 6       | 15.51                                                  | 15.56 | 18.55 |
|                | 2 462           | 11      | 13.16                                                  | 13.05 | 16.12 |
|                | 2 467           | 12      | 10.30                                                  | 10.21 | 13.27 |
|                | 2 472           | 13      | 6.72                                                   | 6.45  | 9.60  |

### 11.4.3 IEEE 802.11 (2.4 GHz) Conducted Power (RSDB Mode Power Back-off on when triggered by RCV on (Reduced Power))

| Mode              | Frequency [MHz] | Channel | IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm] |       |       |
|-------------------|-----------------|---------|--------------------------------------------------------|-------|-------|
|                   |                 |         | Ant.1                                                  | Ant.2 | MIMO  |
| 802.11b           | 2 412           | 1       | 12.49                                                  | 13.31 |       |
|                   | 2 437           | 6       | 12.48                                                  | 12.41 |       |
|                   | 2 462           | 11      | 12.57                                                  | 13.05 |       |
|                   | 2 467           | 12      | 9.85                                                   | 9.88  |       |
|                   | 2 472           | 13      | 6.19                                                   | 5.91  |       |
| 802.11g           | 2 412           | 1       | 12.43                                                  | 12.43 | 15.44 |
|                   | 2 437           | 6       | 11.90                                                  | 11.67 | 14.80 |
|                   | 2 462           | 11      | 12.25                                                  | 12.55 | 15.41 |
|                   | 2 467           | 12      | 9.61                                                   | 9.22  | 12.43 |
|                   | 2 472           | 13      | 5.79                                                   | 5.18  | 8.51  |
| 802.11n<br>(HT20) | 2 412           | 1       | 12.34                                                  | 12.66 | 15.51 |
|                   | 2 437           | 6       | 11.86                                                  | 11.85 | 14.87 |
|                   | 2 462           | 11      | 12.26                                                  | 12.48 | 15.38 |
|                   | 2 467           | 12      | 9.70                                                   | 9.57  | 12.65 |
|                   | 2 472           | 13      | 5.80                                                   | 5.33  | 8.58  |
| 802.11ax(SU)      | 2 412           | 1       | 12.69                                                  | 12.98 | 15.85 |
|                   | 2 437           | 6       | 12.62                                                  | 12.86 | 15.75 |
|                   | 2 462           | 11      | 12.74                                                  | 12.96 | 15.86 |
|                   | 2 467           | 12      | 10.22                                                  | 9.94  | 13.09 |
|                   | 2 472           | 13      | 6.90                                                   | 6.72  | 9.82  |

### 11.4.3 IEEE 802.11 (5 GHz) Maximum Conducted Power

| Mode                    | Frequency [MHz] | Channel | IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm] |        |       |
|-------------------------|-----------------|---------|------------------------------------------------------|--------|-------|
|                         |                 |         | Ant. 1                                               | Ant. 2 | MIMO  |
| 802.11a<br>(20 MHz BW)  | 5 180           | 36      | 16.87                                                | 17.45  | 20.18 |
|                         | 5 200           | 40      | 16.99                                                | 17.46  | 20.24 |
|                         | 5 240           | 48      | 16.94                                                | 17.45  | 20.22 |
|                         | 5 260           | 52      | 17.11                                                | 17.47  | 20.30 |
|                         | 5 300           | 60      | 17.10                                                | 17.29  | 20.21 |
|                         | 5 320           | 64      | 15.92                                                | 16.04  | 18.99 |
|                         | 5 500           | 100     | 14.98                                                | 16.16  | 18.62 |
|                         | 5 600           | 120     | 16.20                                                | 17.21  | 19.74 |
|                         | 5 720           | 144     | 17.38                                                | 17.35  | 20.37 |
|                         | 5 745           | 149     | 17.65                                                | 17.39  | 20.53 |
|                         | 5 785           | 157     | 17.82                                                | 17.40  | 20.63 |
|                         | 5 825           | 165     | 17.71                                                | 17.39  | 20.56 |
| 802.11n<br>(20MHz BW)   | 5 180           | 36      | 17.01                                                | 17.19  | 20.11 |
|                         | 5 200           | 40      | 17.04                                                | 17.24  | 20.15 |
|                         | 5 240           | 48      | 17.12                                                | 17.29  | 20.21 |
|                         | 5 260           | 52      | 17.12                                                | 17.32  | 20.23 |
|                         | 5 300           | 60      | 17.13                                                | 17.19  | 20.17 |
|                         | 5 320           | 64      | 16.03                                                | 15.97  | 19.01 |
|                         | 5 500           | 100     | 15.14                                                | 15.10  | 18.13 |
|                         | 5 600           | 120     | 16.24                                                | 17.17  | 19.74 |
|                         | 5 720           | 144     | 17.35                                                | 17.27  | 20.32 |
|                         | 5 745           | 149     | 17.57                                                | 17.37  | 20.48 |
|                         | 5 785           | 157     | 17.75                                                | 17.47  | 20.62 |
|                         | 5 825           | 165     | 17.71                                                | 17.23  | 20.49 |
| Mode                    | Frequency [MHz] | Channel | IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm] |        |       |
|                         |                 |         | Ant. 1                                               | Ant. 2 | MIMO  |
| 802.11ac<br>(20 MHz BW) | 5 180           | 36      | 16.94                                                | 17.28  | 20.13 |
|                         | 5 200           | 40      | 16.99                                                | 17.23  | 20.12 |
|                         | 5 240           | 48      | 17.08                                                | 17.26  | 20.18 |
|                         | 5 260           | 52      | 17.19                                                | 17.40  | 20.30 |
|                         | 5 300           | 60      | 17.16                                                | 17.25  | 20.22 |
|                         | 5 320           | 64      | 15.97                                                | 15.97  | 18.98 |
|                         | 5 500           | 100     | 15.07                                                | 14.92  | 18.01 |
|                         | 5 600           | 120     | 16.27                                                | 17.15  | 19.74 |
|                         | 5 720           | 144     | 17.45                                                | 17.29  | 20.38 |
|                         | 5 745           | 149     | 17.72                                                | 17.53  | 20.64 |
|                         | 5 785           | 157     | 17.83                                                | 17.44  | 20.65 |
|                         | 5 825           | 165     | 17.81                                                | 17.20  | 20.52 |

| Frequency [MHz] | Channel | IEEE 802.11 ax (SU 20 MHz BW)<br>Conducted<br>Power [dBm] |       |       |
|-----------------|---------|-----------------------------------------------------------|-------|-------|
|                 |         | Ant.1                                                     | Ant.2 | MIMO  |
| 5 180           | 36      |                                                           |       | 19.45 |
| 5 200           | 40      |                                                           |       | 20.34 |
| 5 240           | 48      |                                                           |       | 20.61 |
| 5 260           | 52      |                                                           |       | 20.71 |
| 5 300           | 60      |                                                           |       | 20.60 |
| 5 320           | 64      |                                                           |       | 19.53 |
| 5 500           | 100     |                                                           |       | 17.64 |
| 5 600           | 120     |                                                           |       | 20.75 |
| 5 720           | 144     |                                                           |       | 20.86 |
| 5 745           | 149     |                                                           |       | 20.85 |
| 5 785           | 157     |                                                           |       | 20.86 |
| 5 825           | 165     |                                                           |       | 20.92 |

#### 11.4.4 IEEE 802.11 (5 GHz) Reduced Conducted Power (RCV ON )

| Mode                    | Frequency [MHz] | Channel | IEEE 802.11 (5 GHz) Reduced Average Conducted Power [dBm] |        |       |
|-------------------------|-----------------|---------|-----------------------------------------------------------|--------|-------|
|                         |                 |         | Ant. 1                                                    | Ant. 2 | MIMO  |
| 802.11n<br>(40 MHz BW)  | 5190            | 38      | 12.57                                                     | 12.42  | 15.51 |
|                         | 5230            | 46      | 14.14                                                     | 13.03  | 16.63 |
|                         | 5270            | 54      | 13.80                                                     | 13.07  | 16.46 |
|                         | 5310            | 62      | 12.57                                                     | 12.09  | 15.35 |
|                         | 5510            | 102     | 11.46                                                     | 12.35  | 14.94 |
|                         | 5590            | 118     | 14.36                                                     | 13.06  | 16.77 |
|                         | 5710            | 142     | 14.65                                                     | 13.30  | 17.04 |
|                         | 5755            | 151     | 14.69                                                     | 13.38  | 17.09 |
|                         | 5795            | 159     | 14.66                                                     | 13.24  | 17.02 |
| 802.11ac<br>(80 MHz BW) | 5210            | 42      | 12.68                                                     | 12.42  | 15.56 |
|                         | 5290            | 58      | 12.52                                                     | 12.50  | 15.52 |
|                         | 5530            | 106     | 11.23                                                     | 12.40  | 14.86 |
|                         | 5610            | 122     | 14.30                                                     | 13.06  | 16.73 |
|                         | 5690            | 138     | 14.47                                                     | 13.17  | 16.88 |
|                         | 5775            | 155     | 14.53                                                     | 13.02  | 16.85 |

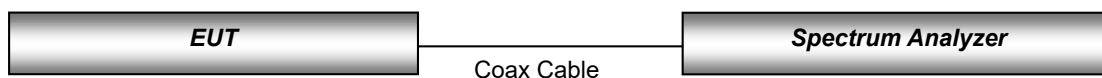
#### 11.4.5 IEEE 802.11 (5 GHz) Conducted Power (RSDB, RSDB RCV On)

| Mode                    | Frequency [MHz] | Channel | IEEE 802.11 (5 GHz) Average Conducted Power [dBm] |        |       |
|-------------------------|-----------------|---------|---------------------------------------------------|--------|-------|
|                         |                 |         | Ant. 1                                            | Ant. 2 | MIMO  |
| 802.11n<br>(40 MHz BW)  | 5190            | 38      | 12.57                                             | 12.42  | 15.51 |
|                         | 5230            | 46      | 13.18                                             | 12.04  | 15.66 |
|                         | 5270            | 54      | 13.00                                             | 12.11  | 15.59 |
|                         | 5310            | 62      | 12.57                                             | 12.09  | 15.35 |
|                         | 5 510           | 102     | 11.46                                             | 12.35  | 14.94 |
|                         | 5 590           | 118     | 13.13                                             | 12.03  | 15.63 |
|                         | 5 710           | 142     | 13.61                                             | 12.35  | 16.04 |
|                         | 5 755           | 151     | 13.61                                             | 12.35  | 16.04 |
|                         | 5 795           | 159     | 13.60                                             | 12.29  | 16.00 |
| 802.11ac<br>(80 MHz BW) | 5 210           | 42      | 12.68                                             | 12.42  | 15.56 |
|                         | 5 290           | 58      | 12.52                                             | 12.50  | 15.52 |
|                         | 5530            | 106     | 11.23                                             | 12.40  | 14.86 |
|                         | 5610            | 122     | 13.20                                             | 12.45  | 15.85 |
|                         | 5690            | 138     | 13.38                                             | 12.53  | 15.99 |
|                         | 5775            | 155     | 13.51                                             | 12.54  | 16.06 |

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission mode with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

#### Test Configuration



## 11.5 Bluetooth Conducted Power

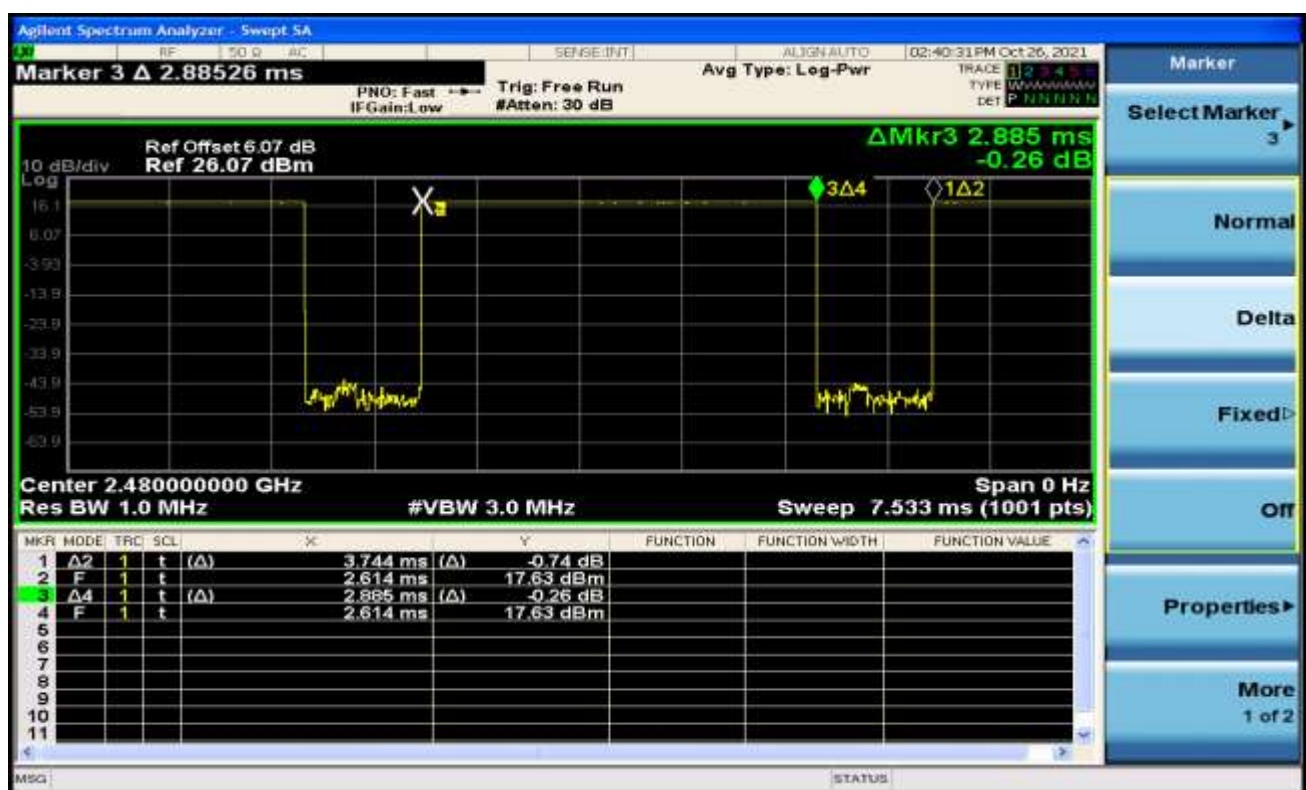
The Burst averaged-conducted power

| Mode  | Channel | Bluetooth Power [dBm] |
|-------|---------|-----------------------|
| DH5   | 0       | 16.10                 |
|       | 39      | 16.94                 |
|       | 78      | 17.40                 |
| 2-DH5 | 0       | 10.10                 |
|       | 39      | 10.68                 |
|       | 78      | 11.22                 |
| 3-DH5 | 0       | 10.18                 |
|       | 39      | 10.70                 |
|       | 78      | 11.36                 |

Per October 2016 TCB Workshop Notes:

When call box and Bluetooth protocol are used for Bluetooth SAR measurement, time-domain plot is required to identify duty factor for supporting the test setup and result.

Bluetooth duty cycle was measured using Bluetooth tester equipment (CBT / R&S) with Bluetooth DH5 mode.



Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (2.885 / 3.744) = 0.771 \text{ (DH5)}$$

Duty factor= 1/Duty cycle : 1.298

## 12. System Verification

### 12.1 Tissue Verification

The body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

| Table for Head Tissue Verification |                   |             |             |                                      |                                            |                                    |                                          |                |                  |
|------------------------------------|-------------------|-------------|-------------|--------------------------------------|--------------------------------------------|------------------------------------|------------------------------------------|----------------|------------------|
| Date of Tests                      | Tissue Temp. (°C) | Tissue Type | Freq. (MHz) | Measured Conductivity $\sigma$ (S/m) | Measured Dielectric Constant, $\epsilon_r$ | Target Conductivity $\sigma$ (S/m) | Target Dielectric Constant, $\epsilon_r$ | % dev $\sigma$ | % dev $\epsilon$ |
| 10/06/2021                         | 20.7              | 750H        | 705         | 0.873                                | 43.130                                     | 0.889                              | 42.174                                   | -1.80          | 2.27             |
|                                    |                   |             | 710         | 0.875                                | 43.109                                     | 0.890                              | 42.148                                   | -1.69          | 2.28             |
|                                    |                   |             | 750         | 0.890                                | 42.959                                     | 0.893                              | 41.940                                   | -0.34          | 2.43             |
| 10/07/2021                         | 21.1              | 750H        | 750         | 0.900                                | 42.942                                     | 0.893                              | 41.940                                   | 0.78           | 2.39             |
|                                    |                   |             | 785         | 0.915                                | 42.846                                     | 0.896                              | 41.758                                   | 2.12           | 2.61             |
| 10/06/2021                         | 20.8              | 835H        | 820         | 0.908                                | 41.811                                     | 0.899                              | 41.577                                   | 1.00           | 0.56             |
|                                    |                   |             | 835         | 0.926                                | 41.580                                     | 0.900                              | 41.500                                   | 2.89           | 0.19             |
|                                    |                   |             | 850         | 0.938                                | 41.401                                     | 0.916                              | 41.500                                   | 2.40           | -0.24            |
| 10/02/2021                         | 20.1              | 835H        | 820         | 0.924                                | 41.225                                     | 0.899                              | 41.577                                   | 2.78           | -0.85            |
|                                    |                   |             | 835         | 0.936                                | 41.004                                     | 0.900                              | 41.500                                   | 4.00           | -1.20            |
|                                    |                   |             | 850         | 0.948                                | 40.794                                     | 0.916                              | 41.500                                   | 3.49           | -1.70            |
| 10/08/2021                         | 22.4              | 835H        | 820         | 0.900                                | 41.726                                     | 0.899                              | 41.577                                   | 0.11           | 0.36             |
|                                    |                   |             | 835         | 0.917                                | 41.470                                     | 0.900                              | 41.500                                   | 1.89           | -0.07            |
|                                    |                   |             | 850         | 0.924                                | 41.264                                     | 0.916                              | 41.500                                   | 0.87           | -0.57            |
| 10/18/2021                         | 22.3              | 835H        | 820         | 0.916                                | 41.256                                     | 0.899                              | 41.577                                   | 1.89           | -0.77            |
|                                    |                   |             | 835         | 0.935                                | 41.039                                     | 0.900                              | 41.500                                   | 3.89           | -1.11            |
|                                    |                   |             | 850         | 0.948                                | 40.768                                     | 0.916                              | 41.500                                   | 3.49           | -1.76            |
| 10/02/2021                         | 20.6              | 1800H       | 1710        | 1.289                                | 40.225                                     | 1.348                              | 40.144                                   | -4.38          | 0.20             |
|                                    |                   |             | 1750        | 1.326                                | 40.159                                     | 1.371                              | 40.080                                   | -3.28          | 0.20             |
|                                    |                   |             | 1800        | 1.374                                | 39.987                                     | 1.400                              | 40.000                                   | -1.86          | -0.03            |
| 10/20/2021                         | 22.1              | 1800H       | 1710        | 1.294                                | 40.962                                     | 1.348                              | 40.144                                   | -4.01          | 2.04             |
|                                    |                   |             | 1750        | 1.322                                | 40.868                                     | 1.371                              | 40.080                                   | -3.57          | 1.97             |
|                                    |                   |             | 1800        | 1.382                                | 40.697                                     | 1.400                              | 40.000                                   | -1.29          | 1.74             |
| 10/14/2021                         | 22.2              | 1800H       | 1710        | 1.305                                | 40.739                                     | 1.348                              | 40.144                                   | -3.19          | 1.48             |
|                                    |                   |             | 1750        | 1.346                                | 40.546                                     | 1.371                              | 40.080                                   | -1.82          | 1.16             |
|                                    |                   |             | 1800        | 1.398                                | 40.316                                     | 1.400                              | 40.000                                   | -0.14          | 0.79             |
| 10/15/2021                         | 21.1              | 1800H       | 1710        | 1.344                                | 40.979                                     | 1.348                              | 40.144                                   | -0.30          | 2.08             |
|                                    |                   |             | 1750        | 1.382                                | 40.854                                     | 1.371                              | 40.080                                   | 0.80           | 1.93             |
|                                    |                   |             | 1800        | 1.447                                | 40.697                                     | 1.400                              | 40.000                                   | 3.36           | 1.74             |
| 10/12/2021                         | 20.5              | 1900H       | 1850        | 1.338                                | 40.987                                     | 1.400                              | 40.000                                   | -4.43          | 2.47             |
|                                    |                   |             | 1900        | 1.383                                | 40.837                                     | 1.400                              | 40.000                                   | -1.21          | 2.09             |
|                                    |                   |             | 1910        | 1.395                                | 40.812                                     | 1.400                              | 40.000                                   | -0.36          | 2.03             |
| 10/13/2021                         | 22.9              | 1900H       | 1850        | 1.384                                | 40.448                                     | 1.400                              | 40.000                                   | -1.14          | 1.12             |
|                                    |                   |             | 1900        | 1.430                                | 40.261                                     | 1.400                              | 40.000                                   | 2.14           | 0.65             |
|                                    |                   |             | 1910        | 1.439                                | 40.256                                     | 1.400                              | 40.000                                   | 2.79           | 0.64             |
| 10/01/2021                         | 20.8              | 1900H       | 1850        | 1.375                                | 41.278                                     | 1.400                              | 40.000                                   | -1.79          | 3.19             |
|                                    |                   |             | 1900        | 1.407                                | 41.041                                     | 1.400                              | 40.000                                   | 0.50           | 2.60             |
|                                    |                   |             | 1910        | 1.412                                | 41.031                                     | 1.400                              | 40.000                                   | 0.86           | 2.58             |
| 10/21/2021                         | 21.9              | 1900H       | 1850        | 1.374                                | 41.503                                     | 1.400                              | 40.000                                   | -1.86          | 3.76             |
|                                    |                   |             | 1900        | 1.427                                | 41.364                                     | 1.400                              | 40.000                                   | 1.93           | 3.41             |
|                                    |                   |             | 1910        | 1.437                                | 41.338                                     | 1.400                              | 40.000                                   | 2.64           | 3.35             |

| Table for Head Tissue Verification |                   |             |             |                                      |                                            |                                    |                                          |                |                  |
|------------------------------------|-------------------|-------------|-------------|--------------------------------------|--------------------------------------------|------------------------------------|------------------------------------------|----------------|------------------|
| Date of Tests                      | Tissue Temp. (°C) | Tissue Type | Freq. (MHz) | Measured Conductivity $\sigma$ (S/m) | Measured Dielectric Constant, $\epsilon_r$ | Target Conductivity $\sigma$ (S/m) | Target Dielectric Constant, $\epsilon_r$ | % dev $\sigma$ | % dev $\epsilon$ |
| 10/07/2021                         | 20.4              | 1900H       | 1850        | 1.357                                | 41.440                                     | 1.400                              | 40.000                                   | -3.07          | 3.60             |
|                                    |                   |             | 1900        | 1.408                                | 41.261                                     | 1.400                              | 40.000                                   | 0.57           | 3.15             |
|                                    |                   |             | 1910        | 1.420                                | 41.195                                     | 1.400                              | 40.000                                   | 1.43           | 2.99             |
| 10/08/2021                         | 20.5              | 1900H       | 1850        | 1.356                                | 41.456                                     | 1.400                              | 40.000                                   | -3.14          | 3.64             |
|                                    |                   |             | 1900        | 1.407                                | 41.250                                     | 1.400                              | 40.000                                   | 0.50           | 3.13             |
|                                    |                   |             | 1910        | 1.416                                | 41.204                                     | 1.400                              | 40.000                                   | 1.14           | 3.01             |
| 10/01/2021                         | 20.2              | 1900H       | 1850        | 1.334                                | 41.684                                     | 1.400                              | 40.000                                   | -4.71          | 4.21             |
|                                    |                   |             | 1900        | 1.399                                | 41.489                                     | 1.400                              | 40.000                                   | -0.07          | 3.72             |
|                                    |                   |             | 1910        | 1.394                                | 41.447                                     | 1.400                              | 40.000                                   | -0.43          | 3.62             |
| 10/19 /2021                        | 22.4              | 1900H       | 1850        | 1.331                                | 41.426                                     | 1.400                              | 40.000                                   | -4.93          | 3.57             |
|                                    |                   |             | 1900        | 1.351                                | 41.234                                     | 1.400                              | 40.000                                   | -3.50          | 3.09             |
|                                    |                   |             | 1910        | 1.361                                | 41.223                                     | 1.400                              | 40.000                                   | -2.79          | 3.06             |
| 10/08/2021                         | 20.7              | 2450H       | 2400        | 1.752                                | 38.073                                     | 1.756                              | 39.290                                   | -0.23          | -3.10            |
|                                    |                   |             | 2450        | 1.827                                | 37.895                                     | 1.800                              | 39.200                                   | 1.50           | -3.33            |
|                                    |                   |             | 2500        | 1.885                                | 37.724                                     | 1.855                              | 39.140                                   | 1.62           | -3.62            |
| 10/02/2021                         | 20.3              | 2450H       | 2400        | 1.742                                | 38.031                                     | 1.756                              | 39.290                                   | -0.80          | -3.20            |
|                                    |                   |             | 2450        | 1.796                                | 37.868                                     | 1.800                              | 39.200                                   | -0.22          | -3.40            |
|                                    |                   |             | 2500        | 1.841                                | 37.721                                     | 1.855                              | 39.140                                   | -0.75          | -3.63            |
| 10/06/2021                         | 19.0              | 2450H       | 2400        | 1.767                                | 38.086                                     | 1.756                              | 39.290                                   | 0.63           | -3.06            |
|                                    |                   |             | 2450        | 1.821                                | 37.898                                     | 1.800                              | 39.200                                   | 1.17           | -3.32            |
|                                    |                   |             | 2500        | 1.881                                | 37.717                                     | 1.855                              | 39.140                                   | 1.40           | -3.64            |
| 10/07/2021                         | 19.9              | 2450H       | 2400        | 1.769                                | 38.101                                     | 1.756                              | 39.290                                   | 0.74           | -3.03            |
|                                    |                   |             | 2450        | 1.822                                | 37.848                                     | 1.800                              | 39.200                                   | 1.22           | -3.45            |
|                                    |                   |             | 2500        | 1.883                                | 37.726                                     | 1.855                              | 39.140                                   | 1.51           | -3.61            |
| 10/01/2021                         | 20.5              | 2600H       | 2500        | 1.849                                | 38.305                                     | 1.855                              | 39.140                                   | -0.32          | -2.13            |
|                                    |                   |             | 2600        | 1.958                                | 37.812                                     | 1.964                              | 39.010                                   | -0.31          | -3.07            |
|                                    |                   |             | 2690        | 2.056                                | 37.566                                     | 2.062                              | 38.894                                   | -0.29          | -3.41            |

| Table for Head Tissue Verification |                   |             |             |                                      |                                            |                                    |                                          |                |                  |
|------------------------------------|-------------------|-------------|-------------|--------------------------------------|--------------------------------------------|------------------------------------|------------------------------------------|----------------|------------------|
| Date of Tests                      | Tissue Temp. (°C) | Tissue Type | Freq. (MHz) | Measured Conductivity $\sigma$ (S/m) | Measured Dielectric Constant, $\epsilon_r$ | Target Conductivity $\sigma$ (S/m) | Target Dielectric Constant, $\epsilon_r$ | % dev $\sigma$ | % dev $\epsilon$ |
| 10/13/2021                         | 20.3              | 5180H-5320H | 5180        | 4.623                                | 35.973                                     | 4.635                              | 36.010                                   | -0.26          | -0.10            |
|                                    |                   |             | 5250        | 4.711                                | 35.796                                     | 4.706                              | 35.930                                   | 0.11           | -0.37            |
|                                    |                   |             | 5280        | 4.749                                | 35.801                                     | 4.737                              | 35.894                                   | 0.25           | -0.26            |
| 10/14/2021                         | 19.1              | 5500H-5600H | 5320        | 4.794                                | 35.817                                     | 4.778                              | 35.846                                   | 0.33           | -0.08            |
|                                    |                   |             | 5500        | 4.973                                | 35.619                                     | 4.963                              | 35.640                                   | 0.20           | -0.06            |
|                                    |                   |             | 5600        | 5.017                                | 35.412                                     | 5.065                              | 35.530                                   | -0.95          | -0.33            |
| 10/15/2021                         | 20.0              | 5750H-5825H | 5750        | 5.271                                | 35.217                                     | 5.219                              | 35.360                                   | 1.00           | -0.40            |
|                                    |                   |             | 5800        | 5.254                                | 35.216                                     | 5.270                              | 35.300                                   | -0.30          | -0.24            |
|                                    |                   |             | 5825        | 5.279                                | 35.217                                     | 5.296                              | 35.270                                   | -0.32          | -0.15            |
| 10/12/2021                         | 23.2              | 5180H-5320H | 5180        | 4.643                                | 36.008                                     | 4.635                              | 36.010                                   | 0.17           | -0.01            |
|                                    |                   |             | 5250        | 4.726                                | 35.870                                     | 4.706                              | 35.930                                   | 0.42           | -0.17            |
|                                    |                   |             | 5280        | 4.759                                | 35.883                                     | 4.737                              | 35.894                                   | 0.46           | -0.03            |
| 10/13/2021                         | 23.0              | 5500H-5600H | 5320        | 4.804                                | 35.809                                     | 4.778                              | 35.846                                   | 0.54           | -0.10            |
|                                    |                   |             | 5500        | 4.972                                | 35.737                                     | 4.963                              | 35.640                                   | 0.18           | 0.27             |
|                                    |                   |             | 5600        | 5.014                                | 35.452                                     | 5.065                              | 35.530                                   | -1.01          | -0.22            |
| 10/14/2021                         | 21.9              | 5750H-5825H | 5750        | 5.269                                | 35.327                                     | 5.219                              | 35.360                                   | 0.96           | -0.09            |
|                                    |                   |             | 5800        | 5.215                                | 35.372                                     | 5.270                              | 35.300                                   | -1.04          | 0.20             |
|                                    |                   |             | 5825        | 5.215                                | 35.324                                     | 5.296                              | 35.270                                   | -1.53          | 0.15             |
| 10/15/2021                         | 21.6              | 5180H-5320H | 5180        | 4.643                                | 36.064                                     | 4.635                              | 36.010                                   | 0.17           | 0.15             |
|                                    |                   |             | 5250        | 4.724                                | 35.836                                     | 4.706                              | 35.930                                   | 0.38           | -0.26            |
|                                    |                   |             | 5280        | 4.750                                | 35.815                                     | 4.737                              | 35.894                                   | 0.27           | -0.22            |
| 10/18/2021                         | 22.3              | 5500H-5600H | 5320        | 4.822                                | 35.864                                     | 4.778                              | 35.846                                   | 0.92           | 0.05             |
|                                    |                   |             | 5500        | 4.986                                | 35.725                                     | 4.963                              | 35.640                                   | 0.46           | 0.24             |
|                                    |                   |             | 5600        | 5.021                                | 35.446                                     | 5.065                              | 35.530                                   | -0.87          | -0.24            |
| 10/19/2021                         | 23.6              | 5750H-5825H | 5750        | 5.271                                | 35.367                                     | 5.219                              | 35.360                                   | 1.00           | 0.02             |
|                                    |                   |             | 5800        | 5.248                                | 35.336                                     | 5.270                              | 35.300                                   | -0.42          | 0.10             |
|                                    |                   |             | 5825        | 5.246                                | 35.288                                     | 5.296                              | 35.270                                   | -0.94          | 0.05             |

## 12.2 System Verification

Input Power: 50 mW

| Freq. | Date       | Probe (S/N) | Dipole (S/N) | Liquid | Amb. Temp. | Liquid Temp. | 1 W Target SAR <sub>1g</sub> (SPEAG) | 50mW Measured SAR <sub>1g</sub> | 1 W Normalized SAR <sub>1g</sub> | Deviation | Limit |
|-------|------------|-------------|--------------|--------|------------|--------------|--------------------------------------|---------------------------------|----------------------------------|-----------|-------|
| [MHz] |            |             |              |        | [°C]       | [°C]         | [W/kg]                               | [W/kg]                          | [W/kg]                           | [%]       | [%]   |
| 750   | 10/06/2021 | 3903        | 1014         | Head   | 20.9       | 20.7         | 8.39                                 | 0.430                           | 8.6                              | + 2.50    | ± 10  |
| 750   | 10/07/2021 | 3903        |              | Head   | 21.2       | 21.1         | 8.39                                 | 0.435                           | 8.7                              | + 3.69    | ± 10  |
| 835   | 10/06/2021 | 3972        | 4d165        | Head   | 20.8       | 20.8         | 9.69                                 | 0.495                           | 9.9                              | + 2.17    | ± 10  |
| 835   | 10/02/2021 | 3903        |              | Head   | 20.2       | 20.1         | 9.69                                 | 0.510                           | 10.2                             | + 5.26    | ± 10  |
| 835   | 10/08/2021 | 3903        |              | Head   | 22.6       | 22.4         | 9.69                                 | 0.500                           | 10                               | + 3.20    | ± 10  |
| 835   | 10/18/2021 | 3972        |              | Head   | 22.4       | 22.3         | 9.69                                 | 0.500                           | 10                               | + 3.20    | ± 10  |
| 1 800 | 10/02/2021 | 3972        |              | Head   | 20.7       | 20.6         | 38.5                                 | 1.910                           | 38.2                             | - 0.78    | ± 10  |
| 1 800 | 10/14/2021 | 3972        | 2d015        | Head   | 22.3       | 22.2         | 38.5                                 | 2.070                           | 41.4                             | + 7.53    | ± 10  |
| 1 900 | 10/12/2021 | 3972        | 5d032        | Head   | 20.6       | 20.5         | 39.9                                 | 2.060                           | 41.2                             | + 3.26    | ± 10  |
| 1 900 | 10/01/2021 | 3903        |              | Head   | 20.9       | 20.8         | 39.9                                 | 1.990                           | 39.8                             | - 0.25    | ± 10  |
| 1 900 | 10/07/2021 | 3972        |              | Head   | 20.5       | 20.4         | 39.9                                 | 2.100                           | 42                               | + 5.26    | ± 10  |
| 1 900 | 10/01/2021 | 3972        |              | Head   | 20.3       | 20.2         | 39.9                                 | 2.020                           | 40.4                             | + 1.25    | ± 10  |
| 2 450 | 10/08/2021 | 3076        | 965          | Head   | 20.9       | 20.7         | 53.4                                 | 2.570                           | 51.4                             | - 3.75    | ± 10  |
| 2 450 | 10/02/2021 | 7679        |              | Head   | 20.4       | 20.3         | 53.4                                 | 2.560                           | 51.2                             | - 4.12    | ± 10  |
| 2 450 | 10/06/2021 | 7679        |              | Head   | 19.0       | 19.0         | 53.4                                 | 2.590                           | 51.8                             | - 3.00    | ± 10  |
| 2 450 | 10/07/2021 | 7679        |              | Head   | 20.1       | 19.9         | 53.4                                 | 2.590                           | 51.8                             | - 3.00    | ± 10  |
| 2 600 | 10/01/2021 | 7679        | 1106         | Head   | 20.5       | 20.5         | 56.5                                 | 2.610                           | 52.2                             | - 7.61    | ± 10  |
| 5 250 | 10/13/2021 | 7370        | 1107         | Head   | 20.3       | 20.2         | 81.6                                 | 3.830                           | 76.6                             | - 6.13    | ± 10  |
| 5 600 | 10/14/2021 | 7370        |              | Head   | 19.1       | 19.1         | 84.0                                 | 4.240                           | 84.8                             | + 0.95    | ± 10  |
| 5 750 | 10/15/2021 | 7370        |              | Head   | 20.0       | 20.0         | 80.9                                 | 3.850                           | 77                               | - 4.82    | ± 10  |
| 5 250 | 10/12/2021 | 7679        |              | Head   | 23.4       | 23.2         | 81.6                                 | 3.770                           | 75.4                             | - 7.60    | ± 10  |
| 5 600 | 10/13/2021 | 7679        |              | Head   | 23.1       | 23.0         | 84.0                                 | 4.200                           | 84                               | + 0.00    | ± 10  |
| 5 750 | 10/14/2021 | 7679        |              | Head   | 22.0       | 21.9         | 80.9                                 | 4.050                           | 81                               | + 0.12    | ± 10  |
| 5 250 | 10/15/2021 | 7679        |              | Head   | 21.8       | 21.6         | 81.6                                 | 3.830                           | 76.6                             | - 6.13    | ± 10  |
| 5 600 | 10/18/2021 | 7679        |              | Head   | 22.3       | 22.3         | 84.0                                 | 4.180                           | 83.6                             | - 0.48    | ± 10  |
| 5 750 | 10/19/2021 | 7679        |              | Head   | 23.8       | 23.6         | 80.9                                 | 4.030                           | 80.6                             | - 0.37    | ± 10  |

### System Verification Results – Extremity SAR

Input Power: 50 mW

| Freq. | Date       | Probe (S/N) | Dipole (S/N) | Liquid | Amb. Temp. | Liquid Temp. | 1 W Target SAR <sub>10g</sub> (SPEAG) | 50mW Measured SAR <sub>10g</sub> | 1 W Normalized SAR <sub>10g</sub> | Deviation | Limit |
|-------|------------|-------------|--------------|--------|------------|--------------|---------------------------------------|----------------------------------|-----------------------------------|-----------|-------|
| [MHz] |            |             |              |        | [°C]       | [°C]         | [W/kg]                                | [W/kg]                           | [W/kg]                            | [%]       | [%]   |
| 1 800 | 10/20/2021 | 3972        | 2d015        | Head   | 22.3       | 22.1         | 20.0                                  | 1.030                            | 20.6                              | + 3.00    | ± 10  |
| 1 900 | 10/15/2021 | 3972        | 5d032        | Head   | 21.2       | 21.1         | 20.7                                  | 1.120                            | 22.4                              | + 8.21    | ± 10  |
| 1 900 | 10/13/2021 | 3972        |              | Head   | 23.0       | 22.9         | 20.7                                  | 1.100                            | 22                                | + 6.28    | ± 10  |
| 1 900 | 10/08/2021 | 3972        |              | Head   | 20.5       | 20.5         | 20.7                                  | 1.080                            | 21.6                              | + 4.35    | ± 10  |
| 1 900 | 10/19/2021 | 3972        |              | Head   | 22.4       | 22.4         | 20.7                                  | 1.040                            | 20.8                              | + 0.48    | ± 10  |
| 1 900 | 10/21/2021 | 3972        |              | Head   | 22.0       | 21.0         | 20.7                                  | 1.060                            | 21.2                              | + 2.42    | ± 10  |
| 5 250 | 10/13/2021 | 7370        | 1107         | Head   | 20.3       | 20.2         | 23.4                                  | 1.110                            | 22.2                              | - 5.13    | ± 10  |
| 5 600 | 10/14/2021 | 7370        |              | Head   | 19.1       | 19.1         | 23.0                                  | 1.210                            | 24.2                              | + 5.22    | ± 10  |
| 5 250 | 10/15/2021 | 7679        |              | Head   | 21.8       | 21.6         | 23.4                                  | 1.130                            | 22.6                              | - 3.42    | ± 10  |
| 5 600 | 10/18/2021 | 7679        |              | Head   | 22.3       | 22.3         | 23.0                                  | 1.220                            | 24.4                              | + 6.09    | ± 10  |

### 12.3 System Verification Procedure

SAR measurement was prior to assessment; the system is verified to the  $\pm 10\%$  of the specifications at each frequency band by using the system verification kit. (Graphic Plots Attached)

- Cabling the system, using the verification kit equipment.
- Generate about 50 mW Input level from the signal generator to the Dipole Antenna.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;

SAR Verification was performed according to the FCC KDB 865664 D01v01r04.

## 13. SAR Test Data Summary

### 13.1 SAR Measurement Results

| GSM 850 Head SAR                                                                                    |     |          |               |             |             |                                          |            |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|-----|----------|---------------|-------------|-------------|------------------------------------------|------------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |     | Mode     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                 | Ch. |          | (dB)          | (dB)        | (dB)        |                                          |            | (W/kg)    |                | (W/kg)       |          |
| 836.6                                                                                               | 190 | GSM      | 34.00         | 33.45       | -0.12       | Left Cheek                               | 1:8.3      | 0.103     | 1.135          | 0.117        | -        |
| 836.6                                                                                               | 190 | GSM      | 34.00         | 33.45       | -0.12       | Left Tilt                                | 1:8.3      | 0.085     | 1.135          | 0.096        | -        |
| 836.6                                                                                               | 190 | GSM      | 34.00         | 33.45       | -0.16       | Right Cheek                              | 1:8.3      | 0.063     | 1.135          | 0.072        | -        |
| 836.6                                                                                               | 190 | GSM      | 34.00         | 33.45       | 0.05        | Right Tilt                               | 1:8.3      | 0.074     | 1.135          | 0.084        | -        |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.50         | 29.65       | -0.02       | Left Cheek                               | 1:2.77     | 0.144     | 1.216          | <b>0.175</b> | 1        |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.50         | 29.65       | -0.10       | Left Tilt                                | 1:2.77     | 0.107     | 1.216          | 0.130        | -        |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.50         | 29.65       | 0.15        | Right Cheek                              | 1:2.77     | 0.097     | 1.216          | 0.118        | -        |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.50         | 29.65       | -0.14       | Right Tilt                               | 1:2.77     | 0.091     | 1.216          | 0.111        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |            |           |                |              |          |

| GSM 1900 Head SAR                                                                                   |     |          |               |             |             |                                          |            |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|-----|----------|---------------|-------------|-------------|------------------------------------------|------------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |     | Mode     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                 | Ch. |          | (dB)          | (dB)        | (dB)        |                                          |            | (W/kg)    |                | (W/kg)       |          |
| 1 880                                                                                               | 661 | GSM      | 31.0          | 30.61       | -0.12       | Left Cheek                               | 1:8.3      | 0.045     | 1.094          | 0.049        | -        |
| 1 880                                                                                               | 661 | GSM      | 31.0          | 30.61       | 0.18        | Left Tilt                                | 1:8.3      | 0.042     | 1.094          | 0.046        | -        |
| 1 880                                                                                               | 661 | GSM      | 31.0          | 30.61       | 0.19        | Right Cheek                              | 1:8.3      | 0.058     | 1.094          | 0.063        | -        |
| 1 880                                                                                               | 661 | GSM      | 31.0          | 30.61       | 0.14        | Right Tilt                               | 1:8.3      | 0.043     | 1.094          | 0.047        | -        |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5          | 27.81       | -0.02       | Left Cheek                               | 1:4.15     | 0.058     | 1.172          | 0.068        | -        |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5          | 27.81       | -0.01       | Left Tilt                                | 1:4.15     | 0.054     | 1.172          | 0.063        | -        |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5          | 27.81       | -0.15       | Right Cheek                              | 1:4.15     | 0.083     | 1.172          | <b>0.097</b> | 2        |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5          | 27.81       | -0.09       | Right Tilt                               | 1:4.15     | 0.054     | 1.172          | 0.063        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |            |           |                |              |          |

| UMTS 850 Head SAR                                                                                   |      |      |               |             |             |                                                 |            |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|-------------------------------------------------|------------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                                   | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                 | Ch.  |      | (dB)          | (dB)        | (dB)        |                                                 |            | (W/kg)    |                | (W/kg)       |          |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | -0.01       | Left Cheek                                      | 1:1        | 0.133     | 1.084          | <b>0.144</b> | 3        |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | 0.12        | Left Tilt                                       | 1:1        | 0.071     | 1.084          | 0.077        | -        |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | -0.07       | Right Cheek                                     | 1:1        | 0.099     | 1.084          | 0.107        | -        |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | -0.06       | Right Tilt                                      | 1:1        | 0.092     | 1.084          | 0.100        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Head<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |            |           |                |              |          |

| UMTS 1700 Head SAR                                                                                  |      |      |               |             |             |                                                 |            |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|-------------------------------------------------|------------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                                   | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                 | Ch.  |      | (dB)          | (dB)        | (dB)        |                                                 |            | (W/kg)    |                | (W/kg)       |          |
| 1 732.4                                                                                             | 1412 | RMC  | 23.5          | 23.17       | 0.17        | Left Cheek                                      | 1:1        | 0.072     | 1.079          | 0.078        | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 23.5          | 23.17       | 0.18        | Left Tilt                                       | 1:1        | 0.052     | 1.079          | 0.056        | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 23.5          | 23.17       | 0.03        | Right Cheek                                     | 1:1        | 0.122     | 1.079          | <b>0.132</b> | 4        |
| 1 732.4                                                                                             | 1412 | RMC  | 23.5          | 23.17       | 0.09        | Right Tilt                                      | 1:1        | 0.076     | 1.079          | 0.082        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Head<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |            |           |                |              |          |

| UMTS 1900 Head SAR                                                                                  |      |      |               |             |             |                                                 |            |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|-------------------------------------------------|------------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                                   | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| Mhz                                                                                                 | Ch.  |      | (dB)          | (dB)        | (dB)        |                                                 |            | (W/kg)    |                | (W/kg)       |          |
| 1 880                                                                                               | 9400 | RMC  | 23.5          | 22.87       | -0.19       | Left Cheek                                      | 1:1        | 0.047     | 1.156          | 0.054        | -        |
| 1 880                                                                                               | 9400 | RMC  | 23.5          | 22.87       | 0.16        | Left Tilt                                       | 1:1        | 0.044     | 1.156          | 0.051        | -        |
| 1 880                                                                                               | 9400 | RMC  | 23.5          | 22.87       | 0.13        | Right Cheek                                     | 1:1        | 0.065     | 1.156          | <b>0.075</b> | 5        |
| 1 880                                                                                               | 9400 | RMC  | 23.5          | 22.87       | -0.16       | Right Tilt                                      | 1:1        | 0.062     | 1.156          | 0.072        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Head<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |            |           |                |              |          |

### LTE Band 2 Head SAR

| Frequency                                                                                           |       | Mode | Band width<br>(MHz) | Tune-Up Limit<br>(dBm) | Meas. Power<br>(dBm) | Power Drift<br>(dB) | Test Position | MPR<br>(dB)                              | RB Size | RB offset | Duty Cycle | Meas. SAR<br>(W/kg) | Scaling Factor | Scaled SAR<br>(W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|---------------------|------------------------|----------------------|---------------------|---------------|------------------------------------------|---------|-----------|------------|---------------------|----------------|----------------------|----------|
| MHz                                                                                                 | Ch.   |      |                     |                        |                      |                     |               |                                          |         |           |            |                     |                |                      |          |
| 1 900                                                                                               | 19100 | QPSK | 20                  | 23.0                   | 22.58                | 0.19                | Left Cheek    | 0                                        | 1       | 0         | 1:1        | 0.085               | 1.102          | 0.094                | -        |
| 1 900                                                                                               | 19100 | QPSK | 20                  | 22.0                   | 21.57                | 0.12                | Left Cheek    | 1                                        | 50      | 0         | 1:1        | 0.067               | 1.104          | 0.074                | -        |
| 1 900                                                                                               | 19100 | QPSK | 20                  | 23.0                   | 22.58                | -0.07               | Left Tilt     | 0                                        | 1       | 0         | 1:1        | 0.067               | 1.102          | 0.074                | -        |
| 1 900                                                                                               | 19100 | QPSK | 20                  | 22.0                   | 21.57                | 0.12                | Left Tilt     | 1                                        | 50      | 0         | 1:1        | 0.053               | 1.104          | 0.059                | -        |
| 1 900                                                                                               | 19100 | QPSK | 20                  | 23.0                   | 22.58                | -0.13               | Right Cheek   | 0                                        | 1       | 0         | 1:1        | 0.089               | 1.102          | <b>0.098</b>         | 6        |
| 1 900                                                                                               | 19100 | QPSK | 20                  | 22.0                   | 21.57                | -0.05               | Right Cheek   | 1                                        | 50      | 0         | 1:1        | 0.072               | 1.104          | 0.079                | -        |
| 1 900                                                                                               | 19100 | QPSK | 20                  | 23.0                   | 22.58                | 0.06                | Right Tilt    | 0                                        | 1       | 0         | 1:1        | 0.062               | 1.102          | 0.068                | -        |
| 1 900                                                                                               | 19100 | QPSK | 20                  | 22.0                   | 21.57                | 0.03                | Right Tilt    | 1                                        | 50      | 0         | 1:1        | 0.048               | 1.104          | 0.053                | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |                     |                        |                      |                     |               | Head<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |                     |                |                      |          |

### LTE Band 5 Head SAR

| Frequency                                                                                           |       | Mode | Band width<br>(MHz) | Tune-Up Limit<br>(dBm) | Meas. Power<br>(dBm) | Power Drift<br>(dB) | Test Position | MPR<br>(dB)                              | RB Size | RB offset | Duty Cycle | Meas. SAR<br>(W/kg) | Scaling Factor | Scaled SAR<br>(W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|---------------------|------------------------|----------------------|---------------------|---------------|------------------------------------------|---------|-----------|------------|---------------------|----------------|----------------------|----------|
| MHz                                                                                                 | Ch.   |      |                     |                        |                      |                     |               |                                          |         |           |            |                     |                |                      |          |
| 836.5                                                                                               | 20525 | QPSK | 10                  | 25.0                   | 24.78                | -0.16               | Left Cheek    | 0                                        | 1       | 0         | 1:1        | 0.141               | 1.052          | <b>0.148</b>         | 7        |
| 836.5                                                                                               | 20525 | QPSK | 10                  | 24.0                   | 22.71                | 0.15                | Left Cheek    | 1                                        | 25      | 0         | 1:1        | 0.092               | 1.346          | 0.124                | -        |
| 836.5                                                                                               | 20525 | QPSK | 10                  | 25.0                   | 24.78                | -0.08               | Left Tilt     | 0                                        | 1       | 0         | 1:1        | 0.060               | 1.052          | 0.063                | -        |
| 836.5                                                                                               | 20525 | QPSK | 10                  | 24.0                   | 22.71                | -0.11               | Left Tilt     | 1                                        | 25      | 0         | 1:1        | 0.038               | 1.346          | 0.051                | -        |
| 836.5                                                                                               | 20525 | QPSK | 10                  | 25.0                   | 24.78                | -0.14               | Right Cheek   | 0                                        | 1       | 0         | 1:1        | 0.091               | 1.052          | 0.096                | -        |
| 836.5                                                                                               | 20525 | QPSK | 10                  | 24.0                   | 22.71                | 0.08                | Right Cheek   | 1                                        | 25      | 0         | 1:1        | 0.059               | 1.346          | 0.079                | -        |
| 836.5                                                                                               | 20525 | QPSK | 10                  | 25.0                   | 24.78                | -0.07               | Right Tilt    | 0                                        | 1       | 0         | 1:1        | 0.074               | 1.052          | 0.078                | -        |
| 836.5                                                                                               | 20525 | QPSK | 10                  | 24.0                   | 22.71                | -0.05               | Right Tilt    | 1                                        | 25      | 0         | 1:1        | 0.048               | 1.346          | 0.065                | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |                     |                        |                      |                     |               | Head<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |                     |                |                      |          |

### LTE Band 12 Head SAR

| Frequency                                                                                           |       | Mode | Band width<br>(MHz) | Tune-Up Limit<br>(dBm) | Meas. Power<br>(dBm) | Power Drift<br>(dB) | Test Position | MPR<br>(dB)                              | RB Size | RB offset | Duty Cycle | Meas. SAR<br>(W/kg) | Scaling Factor | Scaled SAR<br>(W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|---------------------|------------------------|----------------------|---------------------|---------------|------------------------------------------|---------|-----------|------------|---------------------|----------------|----------------------|----------|
| MHz                                                                                                 | Ch.   |      |                     |                        |                      |                     |               |                                          |         |           |            |                     |                |                      |          |
| 707.5                                                                                               | 23095 | QPSK | 10                  | 24.5                   | 24.29                | -0.19               | Left Cheek    | 0                                        | 1       | 0         | 1:1        | 0.061               | 1.050          | <b>0.064</b>         | 8        |
| 707.5                                                                                               | 23095 | QPSK | 10                  | 23.5                   | 22.86                | -0.05               | Left Cheek    | 1                                        | 25      | 0         | 1:1        | 0.044               | 1.159          | 0.051                | -        |
| 707.5                                                                                               | 23095 | QPSK | 10                  | 24.5                   | 24.29                | -0.02               | Left Tilt     | 0                                        | 1       | 0         | 1:1        | 0.028               | 1.050          | 0.029                | -        |
| 707.5                                                                                               | 23095 | QPSK | 10                  | 23.5                   | 22.86                | -0.16               | Left Tilt     | 1                                        | 25      | 0         | 1:1        | 0.020               | 1.159          | 0.023                | -        |
| 707.5                                                                                               | 23095 | QPSK | 10                  | 24.5                   | 24.29                | -0.19               | Right Cheek   | 0                                        | 1       | 0         | 1:1        | 0.049               | 1.050          | 0.051                | -        |
| 707.5                                                                                               | 23095 | QPSK | 10                  | 23.5                   | 22.86                | 0.12                | Right Cheek   | 1                                        | 25      | 0         | 1:1        | 0.036               | 1.159          | 0.042                | -        |
| 707.5                                                                                               | 23095 | QPSK | 10                  | 24.5                   | 24.29                | 0.06                | Right Tilt    | 0                                        | 1       | 0         | 1:1        | 0.030               | 1.050          | 0.032                | -        |
| 707.5                                                                                               | 23095 | QPSK | 10                  | 23.5                   | 22.86                | -0.05               | Right Tilt    | 1                                        | 25      | 0         | 1:1        | 0.022               | 1.159          | 0.025                | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |                     |                        |                      |                     |               | Head<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |                     |                |                      |          |

### LTE Band 13 Head SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      |            |               |             |             |               |                                          |         |           |            |           |                |              |          |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | 0.12        | Left Cheek    | 0                                        | 1       | 49        | 1:1        | 0.086     | 1.227          | <b>0.106</b> | 9        |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | 0.04        | Left Cheek    | 1                                        | 25      | 24        | 1:1        | 0.060     | 1.349          | 0.081        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | -0.08       | Left Tilt     | 0                                        | 1       | 49        | 1:1        | 0.038     | 1.227          | 0.047        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | 0.06        | Left Tilt     | 1                                        | 25      | 24        | 1:1        | 0.026     | 1.349          | 0.035        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | 0.19        | Right Cheek   | 0                                        | 1       | 49        | 1:1        | 0.054     | 1.227          | 0.066        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | -0.18       | Right Cheek   | 1                                        | 25      | 24        | 1:1        | 0.037     | 1.349          | 0.050        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | -0.10       | Right Tilt    | 0                                        | 1       | 49        | 1:1        | 0.026     | 1.227          | 0.032        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | -0.07       | Right Tilt    | 1                                        | 25      | 24        | 1:1        | 0.018     | 1.349          | 0.024        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Head<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |           |                |              |          |

### LTE Band 25 Head SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      |            |               |             |             |               |                                          |         |           |            |           |                |              |          |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0          | 22.70       | 0.10        | Left Cheek    | 0                                        | 1       | 0         | 1:1        | 0.075     | 1.072          | 0.080        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0          | 21.66       | 0.14        | Left Cheek    | 1                                        | 50      | 0         | 1:1        | 0.053     | 1.081          | 0.057        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0          | 22.70       | 0.01        | Left Tilt     | 0                                        | 1       | 0         | 1:1        | 0.072     | 1.072          | 0.077        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0          | 21.66       | 0.18        | Left Tilt     | 1                                        | 50      | 0         | 1:1        | 0.053     | 1.081          | 0.057        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0          | 22.70       | -0.11       | Right Cheek   | 0                                        | 1       | 0         | 1:1        | 0.098     | 1.072          | <b>0.105</b> | 10       |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0          | 21.66       | 0.15        | Right Cheek   | 1                                        | 50      | 0         | 1:1        | 0.082     | 1.081          | 0.089        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0          | 22.70       | -0.09       | Right Tilt    | 0                                        | 1       | 0         | 1:1        | 0.056     | 1.072          | 0.060        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0          | 21.66       | -0.04       | Right Tilt    | 1                                        | 50      | 0         | 1:1        | 0.042     | 1.081          | 0.045        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Head<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |           |                |              |          |

### LTE Band 26 Head SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      |            |               |             |             |               |                                          |         |           |            |           |                |              |          |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | -0.09       | Left Cheek    | 0                                        | 1       | 0         | 1:1        | 0.100     | 1.216          | <b>0.122</b> | 11       |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | -0.12       | Left Cheek    | 1                                        | 36      | 0         | 1:1        | 0.073     | 1.368          | 0.100        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | -0.12       | Left Tilt     | 0                                        | 1       | 0         | 1:1        | 0.055     | 1.216          | 0.067        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | 0.03        | Left Tilt     | 1                                        | 36      | 0         | 1:1        | 0.041     | 1.368          | 0.056        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | 0.12        | Right Cheek   | 0                                        | 1       | 0         | 1:1        | 0.060     | 1.216          | 0.073        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | 0.16        | Right Cheek   | 1                                        | 36      | 0         | 1:1        | 0.045     | 1.368          | 0.062        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | -0.08       | Right Tilt    | 0                                        | 1       | 0         | 1:1        | 0.053     | 1.216          | 0.064        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | 0.15        | Right Tilt    | 1                                        | 36      | 0         | 1:1        | 0.041     | 1.368          | 0.056        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Head<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |           |                |              |          |

### LTE TDD Band 41 Head SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|-----------|----------------|--------------|----------|
| Mhz                                                                                                 | Ch.   |      |            |               |             |             |               |                                          |         |           |            |           |                |              |          |
| 2 680                                                                                               | 41490 | QPSK | 20         | 24.4          | 24.09       | -0.10       | Left Cheek    | 0                                        | 1       | 0         | 1:1.58     | 0.014     | 1.074          | 0.015        |          |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.25       | 0.01        | Left Cheek    | 1                                        | 50      | 0         | 1:1.58     | 0.00953   | 1.035          | 0.010        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 24.4          | 24.09       | -0.18       | Left Tilt     | 0                                        | 1       | 0         | 1:1.58     | 0.058     | 1.074          | <b>0.062</b> | 12       |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.25       | -0.13       | Left Tilt     | 1                                        | 50      | 0         | 1:1.58     | 0.044     | 1.035          | 0.046        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 24.4          | 24.09       | 0.10        | Right Cheek   | 0                                        | 1       | 0         | 1:1.58     | 0.039     | 1.074          | 0.042        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.25       | 0.10        | Right Cheek   | 1                                        | 50      | 0         | 1:1.58     | 0.027     | 1.035          | 0.028        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 24.4          | 24.09       | -0.10       | Right Tilt    | 0                                        | 1       | 0         | 1:1.58     | 0.034     | 1.074          | 0.037        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.25       | 0.10        | Right Tilt    | 1                                        | 50      | 0         | 1:1.58     | 0.027     | 1.035          | 0.028        | -        |
| <b>Power class 2 (HPUE)</b>                                                                         |       |      |            |               |             |             |               |                                          |         |           |            |           |                |              |          |
| 2 680.0                                                                                             | 41490 | QPSK | 20         | 25.7          | 25.17       | 0.11        | Left Tilt     | 0                                        | 1       | 0         | 1:2.31     | 0.049     | 1.130          | 0.055        | *        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Head<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |           |                |              |          |

Note: \* Data entry indicate LTE 41 Power Class 2(HPUE)

### LTE Band 66 Head SAR

| Frequency                                                                                           |        | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|--------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|-----------|----------------|--------------|----------|
| Mhz                                                                                                 | Ch.    |      |            |               |             |             |               |                                          |         |           |            |           |                |              |          |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7          | 23.17       | 0.11        | Left Cheek    | 0                                        | 1       | 99        | 1:1        | 0.079     | 1.130          | 0.089        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7          | 22.15       | 0.10        | Left Cheek    | 1                                        | 50      | 0         | 1:1        | 0.059     | 1.135          | 0.067        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7          | 23.17       | 0.11        | Left Tilt     | 0                                        | 1       | 99        | 1:1        | 0.073     | 1.130          | 0.082        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7          | 22.15       | 0.15        | Left Tilt     | 1                                        | 50      | 0         | 1:1        | 0.058     | 1.135          | 0.066        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7          | 23.17       | 0.06        | Right Cheek   | 0                                        | 1       | 99        | 1:1        | 0.111     | 1.130          | <b>0.125</b> | 13       |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7          | 22.15       | 0.15        | Right Cheek   | 1                                        | 50      | 0         | 1:1        | 0.086     | 1.135          | 0.098        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7          | 23.17       | -0.02       | Right Tilt    | 0                                        | 1       | 99        | 1:1        | 0.073     | 1.130          | 0.082        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7          | 22.15       | -0.01       | Right Tilt    | 1                                        | 50      | 0         | 1:1        | 0.057     | 1.135          | 0.065        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |      |            |               |             |             |               | Head<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |           |                |              |          |

### DTS Head SAR – RCV on

| Frequency                                                                                           |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle                               | Area Scan Peak SAR (W/kg) | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------------------------------------|---------------------------|------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                 | Ch. |         |                  |                  |                     |                   |                  |               |              |                                          |                           |                  |                |                       |                   |          |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.18             | Left Cheek    | Ant1         | 99.1                                     | 0.343                     | 0.202            | 1.358          | 1.009                 | 0.277             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.05             | Left Tilt     | Ant1         | 99.1                                     | 0.419                     | 0.253            | 1.358          | 1.009                 | 0.347             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | -0.09            | Right Cheek   | Ant1         | 99.1                                     | 0.687                     | 0.336            | 1.358          | 1.009                 | 0.460             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.12             | Right Tilt    | Ant1         | 99.1                                     | 0.874                     | 0.430            | 1.358          | 1.009                 | 0.589             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             |                  | Left Cheek    | Ant2         | 99.1                                     | 0                         |                  |                |                       |                   | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             | 0.13             | Left Tilt     | Ant2         | 99.1                                     | 0.0114                    | 0.00191          | 1.253          | 1.009                 | 0.002             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             |                  | Right Cheek   | Ant2         | 99.1                                     | 0                         |                  |                |                       |                   | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             | 0.09             | Right Tilt    | Ant2         | 99.1                                     | 0.0292                    | 0.01             | 1.253          | 1.009                 | 0.013             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 18.06             | 0.03             | Left Cheek    | MIMO         | 93.5                                     | 0.436                     | 0.270            | 1.607          | 1.069                 | 0.464             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 18.06             | 0.12             | Left Tilt     | MIMO         | 93.5                                     | 0.621                     | 0.408            | 1.607          | 1.069                 | 0.701             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 18.06             | 0.07             | Right Cheek   | MIMO         | 93.5                                     | 0.756                     | 0.355            | 1.607          | 1.069                 | 0.610             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 18.06             | -0.06            | Right Tilt    | MIMO         | 93.5                                     | 0.92                      | 0.516            | 1.607          | 1.069                 | <b>0.886</b>      | 14       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |              | Head<br>1.6 W/kg<br>Averaged over 1 gram |                           |                  |                |                       |                   |          |

### DTS Head SAR –RSDB with RCV On

| Frequency                                                                                           |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle                               | Area Scan Peak SAR (W/kg) | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------------------------------------|---------------------------|------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                 | Ch. |         |                  |                  |                     |                   |                  |               |              |                                          |                           |                  |                |                       |                   |          |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                | 14.0                | 12.57             | -0.03            | Left Cheek    | Ant1         | 99.1                                     | 0.261                     | 0.153            | 1.390          | 1.009                 | 0.215             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                | 14.0                | 12.57             | 0.12             | Left Tilt     | Ant1         | 99.1                                     | 0.338                     | 0.214            | 1.390          | 1.009                 | 0.300             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                | 14.0                | 12.57             | -0.17            | Right Cheek   | Ant1         | 99.1                                     | 0.389                     | 0.183            | 1.390          | 1.009                 | 0.257             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                | 14.0                | 12.57             | -0.09            | Right Tilt    | Ant1         | 99.1                                     | 0.554                     | 0.282            | 1.390          | 1.009                 | <b>0.396</b>      | 15       |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 14.0                | 13.31             |                  | Left Cheek    | Ant2         | 99.1                                     | 0                         |                  |                |                       |                   | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 14.0                | 13.31             | 0.01             | Left Tilt     | Ant2         | 99.1                                     | 0.0142                    | 0.00000345       | 1.172          | 1.009                 | 0.000             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 14.0                | 13.31             |                  | Right Cheek   | Ant2         | 99.1                                     | 0                         |                  |                |                       |                   | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 14.0                | 13.31             | 0.07             | Right Tilt    | Ant2         | 99.1                                     | 0.014                     | 0.00393          | 1.172          | 1.009                 | 0.005             | -        |
| 2 412                                                                                               | 1   | 802.11g | 20               | 6                | 17.0                | 15.44             | 0.14             | Left Cheek    | MIMO         | 93.5                                     | 0.209                     | 0.126            | 1.435          | 1.069                 | 0.193             | -        |
| 2 412                                                                                               | 1   | 802.11g | 20               | 6                | 17.0                | 15.44             | -0.19            | Left Tilt     | MIMO         | 93.5                                     | 0.253                     | 0.182            | 1.435          | 1.069                 | 0.279             | -        |
| 2 412                                                                                               | 1   | 802.11g | 20               | 6                | 17.0                | 15.44             | 0.06             | Right Cheek   | MIMO         | 93.5                                     | 0.399                     | 0.186            | 1.435          | 1.069                 | 0.285             | -        |
| 2 412                                                                                               | 1   | 802.11g | 20               | 6                | 17.0                | 15.44             | -0.11            | Right Tilt    | MIMO         | 93.5                                     | 0.455                     | 0.239            | 1.435          | 1.069                 | 0.367             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |              | Head<br>1.6 W/kg<br>Averaged over 1 gram |                           |                  |                |                       |                   |          |

| NII Head SAR RCV on                                                                                 |     |          |            |           |               |             |             |                                          |             |            |                    |              |                |                       |                   |         |
|-----------------------------------------------------------------------------------------------------|-----|----------|------------|-----------|---------------|-------------|-------------|------------------------------------------|-------------|------------|--------------------|--------------|----------------|-----------------------|-------------------|---------|
| Frequency                                                                                           |     | Mode     | Band width | Data Rate | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Ant Config. | Duty Cycle | Area Scan Peak SAR | Meas. SAR    | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No |
| MHz                                                                                                 | Ch. |          | (MHz)      | (Mbps)    | (dBm)         | (dBm)       | (dB)        |                                          |             |            | (W/kg)             | (W/kg)       |                |                       |                   |         |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS0      | 15.0          | 13.80       | 0.08        | Left Cheek                               | Ant1        | 90.3       | 0.218              | 0.054        | 1.318          | 1.107                 | 0.079             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS0      | 15.0          | 13.80       | -0.12       | Left Tilt                                | Ant1        | 90.3       | 0.121              | 0.028        | 1.318          | 1.107                 | 0.041             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS0      | 15.0          | 13.80       | 0.11        | Right Cheek                              | Ant1        | 90.3       | 0.519              | 0.179        | 1.318          | 1.107                 | 0.261             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS0      | 15.0          | 13.80       | -0.18       | Right Tilt                               | Ant1        | 90.3       | 0.295              | 0.107        | 1.318          | 1.107                 | 0.156             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS0      | 15.0          | 13.07       | 0.11        | Left Cheek                               | Ant2        | 90.3       | 0.111              | 0.043        | 1.560          | 1.107                 | 0.074             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS0      | 15.0          | 13.07       | 0.14        | Left Tilt                                | Ant2        | 90.3       | 0.129              | 0.057        | 1.560          | 1.107                 | 0.098             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS0      | 15.0          | 13.07       | -0.09       | Right Cheek                              | Ant2        | 90.3       | 0.164              | 0.042        | 1.560          | 1.107                 | 0.073             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS0      | 15.0          | 13.07       | 0.13        | Right Tilt                               | Ant2        | 90.3       | 0.165              | 0.053        | 1.560          | 1.107                 | 0.092             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS8      | 18.0          | 16.46       | -0.17       | Left Cheek                               | MIMO        | 90.3       | 0.196              | 0.046        | 1.560          | 1.107                 | 0.079             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS8      | 18.0          | 16.46       | 0.07        | Left Tilt                                | MIMO        | 90.3       | 0.156              | 0.067        | 1.560          | 1.107                 | 0.116             | -       |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS8      | 18.0          | 16.46       | -0.10       | Right Cheek                              | MIMO        | 90.3       | 0.553              | 0.227        | 1.560          | 1.107                 | <b>0.392</b>      | 16      |
| 5 270                                                                                               | 54  | 802.11n  | 40         | MCS8      | 18.0          | 16.46       | -0.03       | Right Tilt                               | MIMO        | 90.3       | 0.427              | 0.181        | 1.560          | 1.107                 | 0.313             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 15.0          | 14.47       | 0.01        | Left Cheek                               | Ant1        | 91.0       | 0.207              | 0.044        | 1.130          | 1.099                 | 0.055             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 15.0          | 14.47       | 0.10        | Left Tilt                                | Ant1        | 91.0       | 0.206              | 0.050        | 1.130          | 1.099                 | 0.062             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 15.0          | 14.47       | 0.11        | Right Cheek                              | Ant1        | 91.0       | 0.719              | 0.232        | 1.130          | 1.099                 | 0.288             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 15.0          | 14.47       | -0.17       | Right Tilt                               | Ant1        | 91.0       | 0.386              | 0.127        | 1.130          | 1.099                 | 0.158             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 15.0          | 13.17       |             | Left Cheek                               | Ant2        | 91.0       | 0                  |              |                |                       |                   | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 15.0          | 13.17       | -0.09       | Left Tilt                                | Ant2        | 91.0       | 0.305              | 0.049        | 1.524          | 1.099                 | 0.082             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 15.0          | 13.17       | 0.01        | Right Cheek                              | Ant2        | 91.0       | 0.176              | 0.014        | 1.524          | 1.099                 | 0.023             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 15.0          | 13.17       | -0.12       | Right Tilt                               | Ant2        | 91.0       | 0.107              | 0.013        | 1.524          | 1.099                 | 0.022             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 18.0          | 16.88       | 0.01        | Left Cheek                               | MIMO        | 91.0       | 0.202              | 0.046        | 1.524          | 1.099                 | 0.077             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 18.0          | 16.88       | 0.10        | Left Tilt                                | MIMO        | 91.0       | 0.261              | 0.053        | 1.524          | 1.099                 | 0.089             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 18.0          | 16.88       | -0.10       | Right Cheek                              | MIMO        | 91.0       | 0.618              | 0.219        | 1.524          | 1.099                 | 0.367             | -       |
| 5 690                                                                                               | 138 | 802.11ac | 80         | MCS0      | 18.0          | 16.88       | -0.12       | Right Tilt                               | MIMO        | 91.0       | 0.442              | 0.129        | 1.524          | 1.099                 | 0.216             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 15.0          | 14.53       | 0.01        | Left Cheek                               | Ant1        | 91.0       | 0.180              | 0.044        | 1.114          | 1.099                 | 0.054             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 15.0          | 14.53       | 0.01        | Left Tilt                                | Ant1        | 91.0       | 0.262              | 0.049        | 1.114          | 1.099                 | 0.060             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 15.0          | 14.53       | 0.02        | Right Cheek                              | Ant1        | 91.0       | 0.855              | <b>0.232</b> | 1.114          | 1.099                 | 0.284             | 17      |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 15.0          | 14.53       | -0.10       | Right Tilt                               | Ant1        | 91.0       | 0.653              | 0.188        | 1.114          | 1.099                 | 0.230             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 15.0          | 13.02       | 0.01        | Left Cheek                               | Ant2        | 91.0       | 0.178              | 0.041        | 1.578          | 1.099                 | 0.071             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 15.0          | 13.02       | 0.01        | Left Tilt                                | Ant2        | 91.0       | 0.195              | 0.034        | 1.578          | 1.099                 | 0.059             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 15.0          | 13.02       | 0.12        | Right Cheek                              | Ant2        | 91.0       | 0.076              | 0.018        | 1.578          | 1.099                 | 0.031             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 15.0          | 13.02       | 0.17        | Right Tilt                               | Ant2        | 91.0       | 0.124              | 0.015        | 1.578          | 1.099                 | 0.026             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 18.0          | 16.85       | 0.01        | Left Cheek                               | MIMO        | 91.0       | 0.102              | 0.031        | 1.578          | 1.099                 | 0.054             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 18.0          | 16.85       | 0.01        | Left Tilt                                | MIMO        | 91.0       | 0.224              | 0.035        | 1.578          | 1.099                 | 0.061             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 18.0          | 16.85       | -0.12       | Right Cheek                              | MIMO        | 91.0       | 0.485              | 0.173        | 1.578          | 1.099                 | 0.300             | -       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 18.0          | 16.85       | -0.14       | Right Tilt                               | MIMO        | 91.0       | 0.461              | 0.124        | 1.578          | 1.099                 | 0.215             | -       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |            |           |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |             |            |                    |              |                |                       |                   |         |

The output of RCV on in the 5GHz WLAN mode of this device is higher than that in the 5GHz WLAN RSDB with RCV on mode. The higher output RCV on Head SAR measurement results of the 5GHz WLAN mode were applied to the SAR simultaneous transmission analysis instead of the Head SAR results of the 5GHz WLAN mode RSDB-RCV on mode. It was confirmed that this product satisfies the FCC SAR limit through simultaneous transmission evaluation of RSDB with RCV on mode applying the head SAR measurement result with higher output power.

| DSS Head SAR                                                                                        |     |               |               |             |             |                                                 |           |                |                |              |          |
|-----------------------------------------------------------------------------------------------------|-----|---------------|---------------|-------------|-------------|-------------------------------------------------|-----------|----------------|----------------|--------------|----------|
| Frequency                                                                                           |     | Mode          | Tune-Up Limit | Meas. Power | Power Drift | Test Position                                   | Meas. SAR | Scaling Factor | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                 | Ch. |               | (dBm)         | (dBm)       | (dB)        |                                                 | (W/kg)    |                | (Duty)         | (W/kg)       |          |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.5          | 17.40       | -0.14       | Left Cheek                                      | 0.462     | 1.023          | 1.298          | 0.613        | -        |
| 2 402                                                                                               | 0   | Bluetooth DH5 | 17.5          | 16.10       | -0.18       | Left Tilt                                       | 0.247     | 1.380          | 1.298          | 0.442        | -        |
| 2 441                                                                                               | 39  | Bluetooth DH5 | 17.5          | 16.94       | -0.12       | Left Tilt                                       | 0.302     | 1.138          | 1.298          | 0.446        | -        |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.5          | 17.40       | 0.05        | Left Tilt                                       | 0.678     | 1.023          | 1.298          | 0.900        | -        |
| 2 402                                                                                               | 0   | Bluetooth DH5 | 17.5          | 16.10       | 0.12        | Right Cheek                                     | 0.308     | 1.380          | 1.298          | 0.552        | -        |
| 2 441                                                                                               | 39  | Bluetooth DH5 | 17.5          | 16.94       | -0.10       | Right Cheek                                     | 0.416     | 1.138          | 1.298          | 0.614        | -        |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.5          | 17.40       | 0.14        | Right Cheek                                     | 0.611     | 1.023          | 1.298          | 0.811        | -        |
| 2 402                                                                                               | 0   | Bluetooth DH5 | 17.5          | 16.10       | -0.12       | Right Tilt                                      | 0.326     | 1.380          | 1.298          | 0.584        | -        |
| 2 441                                                                                               | 39  | Bluetooth DH5 | 17.5          | 16.94       | -0.11       | Right Tilt                                      | 0.462     | 1.138          | 1.298          | 0.682        | -        |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.5          | 17.40       | -0.18       | Right Tilt                                      | 0.712     | 1.023          | 1.298          | <b>0.945</b> | 18       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |               |               |             |             | Head<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |           |                |                |              |          |

## 13.2 Body-worn SAR Measurement Results

| GSM/ UMTS Body-Worn SAR                                                                             |      |                  |               |             |             |               |                                          |          |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|------|------------------|---------------|-------------|-------------|---------------|------------------------------------------|----------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |      | Mode             | Tune-Up Limit | Meas. Power | Power Drift | Test Position | Duty Cycle                               | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| Mhz                                                                                                 | Ch.  |                  | (dB)          | (dB)        | (dB)        |               |                                          | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 836.6                                                                                               | 190  | GSM 850 Voice    | 34.0          | 33.45       | -0.10       | Rear          | 1:8.3                                    | 15       | 0.261     | 1.135          | 0.296        | -        |
| 836.6                                                                                               | 190  | GSM 850 Voice    | 34.0          | 33.45       | -0.09       | Front         | 1:8.3                                    | 15       | 0.235     | 1.135          | 0.267        | -        |
| 836.6                                                                                               | 190  | GSM850 GPRS 3Tx  | 30.5          | 29.65       | -0.06       | Rear          | 1:2.77                                   | 15       | 0.294     | 1.216          | <b>0.358</b> | 19       |
| 836.6                                                                                               | 190  | GSM850 GPRS 3Tx  | 30.5          | 29.65       | 0.04        | Front         | 1:2.77                                   | 15       | 0.293     | 1.216          | 0.356        | -        |
| 1 880                                                                                               | 661  | GSM 1900 Voice   | 31.0          | 30.61       | 0.11        | Rear          | 1:8.3                                    | 15       | 0.307     | 1.094          | 0.336        | -        |
| 1 880                                                                                               | 661  | GSM 1900 Voice   | 31.0          | 30.61       | 0.06        | Front         | 1:8.3                                    | 15       | 0.244     | 1.094          | 0.267        | -        |
| 1 909.8                                                                                             | 810  | GSM1900 GPRS 2Tx | 28.5          | 27.81       | 0.09        | Rear          | 1:4.15                                   | 15       | 0.453     | 1.172          | <b>0.531</b> | 20       |
| 1 909.8                                                                                             | 810  | GSM1900 GPRS 2Tx | 28.5          | 27.81       | -0.01       | Front         | 1:4.15                                   | 15       | 0.364     | 1.172          | 0.427        | -        |
| 836.6                                                                                               | 4183 | UMTS850          | RMC           | 25.0        | 24.65       | -0.07         | Rear                                     | 1:1      | 0.247     | 1.084          | <b>0.268</b> | 21       |
| 836.6                                                                                               | 4183 | UMTS850          | RMC           | 25.0        | 24.65       | 0.03          | Front                                    | 1:1      | 0.210     | 1.084          | 0.228        | -        |
| 1 732.4                                                                                             | 1412 | UMTS1700         | RMC           | 23.5        | 23.17       | -0.03         | Rear                                     | 1:1      | 0.444     | 1.079          | <b>0.479</b> | 22       |
| 1 732.4                                                                                             | 1412 | UMTS1700         | RMC           | 23.5        | 23.17       | -0.06         | Front                                    | 1:1      | 0.346     | 1.079          | 0.373        | -        |
| 1 880                                                                                               | 9400 | UMTS1900         | RMC           | 23.5        | 22.87       | -0.18         | Rear                                     | 1:1      | 0.384     | 1.156          | <b>0.444</b> | 23       |
| 1 880                                                                                               | 9400 | UMTS1900         | RMC           | 23.5        | 22.87       | 0.02          | Front                                    | 1:1      | 0.314     | 1.156          | 0.363        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |                  |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |          |           |                |              |          |

| LTE Body-Worn SAR                                                                                   |        |             |            |               |             |             |                                          |      |         |           |            |          |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|--------|-------------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |        | Mode        | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| Mhz                                                                                                 | Ch.    |             | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            |          | (mm)      |                | (W/kg)       |          |
| 1 900                                                                                               | 19100  | LTE 2 QPSK  | 20         | 23.0          | 22.58       | 0.06        | Rear                                     | 0    | 1       | 0         | 1:1        | 15       | 0.635     | 1.104          | <b>0.700</b> | 24       |
| 1 900                                                                                               | 19100  |             | 20         | 22.0          | 21.57       | 0.14        | Rear                                     | 1    | 50      | 0         | 1:1        | 15       | 0.536     | 1.102          | 0.592        |          |
| 1 900                                                                                               | 19100  |             | 20         | 23.0          | 22.58       | 0.09        | Front                                    | 0    | 1       | 0         | 1:1        | 15       | 0.616     | 1.102          | 0.679        | -        |
| 1 900                                                                                               | 19100  |             | 20         | 22.0          | 21.57       | 0.07        | Front                                    | 1    | 50      | 0         | 1:1        | 15       | 0.485     | 1.104          | 0.535        | -        |
| 836.5                                                                                               | 20525  | LTE 5 QPSK  | 10         | 25.0          | 24.78       | -0.15       | Rear                                     | 0    | 1       | 0         | 1:1        | 15       | 0.375     | 1.052          | <b>0.394</b> | 25       |
| 836.5                                                                                               | 20525  |             | 10         | 24.0          | 22.71       | -0.09       | Rear                                     | 1    | 25      | 0         | 1:1        | 15       | 0.243     | 1.346          | 0.327        | -        |
| 836.5                                                                                               | 20525  |             | 10         | 25.0          | 24.78       | 0.01        | Front                                    | 0    | 1       | 0         | 1:1        | 15       | 0.231     | 1.052          | 0.243        | -        |
| 836.5                                                                                               | 20525  |             | 10         | 24.0          | 22.71       | -0.03       | Front                                    | 1    | 25      | 0         | 1:1        | 15       | 0.152     | 1.346          | 0.205        | -        |
| 707.5                                                                                               | 23095  | LTE 12 QPSK | 10         | 24.5          | 24.29       | -0.13       | Rear                                     | 0    | 1       | 0         | 1:1        | 15       | 0.074     | 1.050          | <b>0.078</b> | 26       |
| 707.5                                                                                               | 23095  |             | 10         | 23.5          | 22.86       | -0.07       | Rear                                     | 1    | 25      | 0         | 1:1        | 15       | 0.055     | 1.159          | 0.064        | -        |
| 707.5                                                                                               | 23095  |             | 10         | 24.5          | 24.29       | -0.03       | Front                                    | 0    | 1       | 0         | 1:1        | 15       | 0.055     | 1.050          | 0.058        | -        |
| 707.5                                                                                               | 23095  |             | 10         | 23.5          | 22.86       | -0.14       | Front                                    | 1    | 25      | 0         | 1:1        | 15       | 0.025     | 1.159          | 0.029        | -        |
| 782                                                                                                 | 23230  | LTE 13 QPSK | 10         | 25.0          | 24.11       | -0.01       | Rear                                     | 0    | 1       | 49        | 1:1        | 15       | 0.187     | 1.227          | <b>0.229</b> | 27       |
| 782                                                                                                 | 23230  |             | 10         | 24.0          | 22.70       | -0.06       | Rear                                     | 1    | 25      | 24        | 1:1        | 15       | 0.131     | 1.349          | 0.177        | -        |
| 782                                                                                                 | 23230  |             | 10         | 25.0          | 24.11       | -0.02       | Front                                    | 0    | 1       | 49        | 1:1        | 15       | 0.133     | 1.227          | 0.163        | -        |
| 782                                                                                                 | 23230  |             | 10         | 24.0          | 22.70       | -0.04       | Front                                    | 1    | 25      | 24        | 1:1        | 15       | 0.106     | 1.349          | 0.143        | -        |
| 1 905                                                                                               | 26590  | LTE 25 QPSK | 20         | 23.0          | 22.70       | -0.03       | Rear                                     | 0    | 1       | 0         | 1:1        | 15       | 0.518     | 1.072          | <b>0.555</b> | 28       |
| 1 905                                                                                               | 26590  |             | 20         | 22.0          | 21.66       | 0.07        | Rear                                     | 1    | 50      | 0         | 1:1        | 15       | 0.418     | 1.081          | 0.452        | -        |
| 1 905                                                                                               | 26590  |             | 20         | 23.0          | 22.70       | 0.02        | Front                                    | 0    | 1       | 0         | 1:1        | 15       | 0.405     | 1.072          | 0.434        | -        |
| 1 905                                                                                               | 26590  |             | 20         | 22.0          | 21.66       | 0.05        | Front                                    | 1    | 50      | 0         | 1:1        | 15       | 0.327     | 1.081          | 0.353        | -        |
| 831.5                                                                                               | 26865  | LTE 26 QPSK | 15         | 25.0          | 24.15       | -0.03       | Rear                                     | 0    | 1       | 0         | 1:1        | 15       | 0.237     | 1.216          | <b>0.288</b> | 29       |
| 831.5                                                                                               | 26865  |             | 15         | 24.0          | 22.64       | -0.09       | Rear                                     | 1    | 36      | 0         | 1:1        | 15       | 0.170     | 1.368          | 0.233        | -        |
| 831.5                                                                                               | 26865  |             | 15         | 25.0          | 24.15       | 0.01        | Front                                    | 0    | 1       | 0         | 1:1        | 15       | 0.190     | 1.216          | 0.231        | -        |
| 831.5                                                                                               | 26865  |             | 15         | 24.0          | 22.64       | 0.04        | Front                                    | 1    | 36      | 0         | 1:1        | 15       | 0.146     | 1.368          | 0.200        | -        |
| 2 680                                                                                               | 41490  | LTE 41 QPSK | 20         | 24.4          | 24.09       | -0.17       | Rear                                     | 0    | 1       | 0         | 1:1.58     | 15       | 0.434     | 1.074          | <b>0.466</b> | 30       |
| 2 680                                                                                               | 41490  |             | 20         | 23.4          | 23.25       | 0.12        | Rear                                     | 1    | 50      | 0         | 1:1.58     | 15       | 0.364     | 1.035          | 0.377        | -        |
| 2 680                                                                                               | 41490  |             | 20         | 24.4          | 24.09       | 0.04        | Front                                    | 0    | 1       | 0         | 1:1.58     | 15       | 0.305     | 1.074          | 0.328        | -        |
| 2 680                                                                                               | 41490  |             | 20         | 23.4          | 23.25       | -0.05       | Front                                    | 1    | 50      | 0         | 1:1.58     | 15       | 0.254     | 1.035          | 0.263        | -        |
| Power class 2 (HPUE)                                                                                |        |             |            |               |             |             |                                          |      |         |           |            |          |           |                |              |          |
| 2 680.0                                                                                             | 41490  | QPSK        | 20         | 25.7          | 25.17       | 0.02        | Rear                                     | 0    | 1       | 0         | 1:2.31     | 15       | 0.352     | 1.130          | 0.398        | *        |
| 1 720                                                                                               | 132072 | LTE 66 QPSK | 20         | 23.7          | 23.17       | 0.10        | Rear                                     | 0    | 1       | 99        | 1:1        | 15       | 0.492     | 1.130          | <b>0.556</b> | 31       |
| 1 720                                                                                               | 132072 |             | 20         | 22.7          | 22.15       | 0.08        | Rear                                     | 1    | 50      | 0         | 1:1        | 15       | 0.406     | 1.135          | 0.461        | -        |
| 1 720                                                                                               | 132072 |             | 20         | 23.7          | 23.17       | 0.05        | Front                                    | 0    | 1       | 99        | 1:1        | 15       | 0.400     | 1.130          | 0.452        | -        |
| 1 720                                                                                               | 132072 |             | 20         | 22.7          | 22.15       | 0.10        | Front                                    | 1    | 50      | 0         | 1:1        | 15       | 0.331     | 1.135          | 0.376        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |             |            |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |          |           |                |              |          |

Note: \* Data entry indicate LTE 41 Power Class 2(HPUE)

### DTS Body-Worn SAR

| Frequency                                                                                           |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------|---------------|------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                 | Ch. |         |                  |                  |                     |                   |                  |               |              |            |               |                                          |                  |                |                       |                   |          |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 20.0                | 19.05             | 0.07             | Rear          | Ant1         | 99.1       | 15            | 0.202                                    | 0.118            | 1.245          | 1.009                 | 0.148             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 20.0                | 19.05             | 0.03             | Front         | Ant1         | 99.1       | 15            | 0.106                                    | 0.061            | 1.245          | 1.009                 | 0.077             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                | 20.0                | 19.45             | -0.09            | Rear          | Ant2         | 99.1       | 15            | 0.191                                    | 0.094            | 1.135          | 1.009                 | 0.108             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                | 20.0                | 19.45             | 0.06             | Front         | Ant2         | 99.1       | 15            | 0.022                                    | 0.00853          | 1.135          | 1.009                 | 0.010             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 19.72             | -0.11            | Rear          | MIMO         | 93.5       | 15            | 0.302                                    | 0.198            | 1.094          | 1.069                 | <b>0.232</b>      | 32       |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 19.72             | -0.18            | Front         | MIMO         | 93.5       | 15            | 0.0311                                   | 0.010            | 1.094          | 1.069                 | 0.012             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |              |            |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                   |          |

### DTS Body-Worn SAR – RSDB

| Frequency                                                                                           |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------|---------------|------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                 | Ch. |         |                  |                  |                     |                   |                  |               |              |            |               |                                          |                  |                |                       |                   |          |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.01             | Rear          | Ant1         | 99.1       | 15            | 0.0899                                   | 0.054            | 1.358          | 1.009                 | 0.074             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.01             | Front         | Ant1         | 99.1       | 15            | 0.0579                                   | 0.036            | 1.358          | 1.009                 | 0.049             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             | 0.02             | Rear          | Ant2         | 99.1       | 15            | 0.0851                                   | 0.048            | 1.253          | 1.009                 | 0.061             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             | 0.01             | Front         | Ant2         | 99.1       | 15            | 0.005                                    | 0.000483         | 1.253          | 1.009                 | 0.001             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 17.76             | 0.01             | Rear          | MIMO         | 93.5       | 15            | 0.147                                    | 0.086            | 1.722          | 1.069                 | <b>0.158</b>      | 33       |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 17.76             | 0.01             | Front         | MIMO         | 93.5       | 15            | 0.0625                                   | 0.035            | 1.722          | 1.069                 | 0.064             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |              |            |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                   |          |

| NII Body-Worn SAR                                                                                   |     |         |                  |                  |                     |                   |                  |               |              |            |               |                                          |                  |                |                       |                   |          |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------|---------------|------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| Frequency                                                                                           |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch. |         |                  |                  |                     |                   |                  |               |              |            |               |                                          |                  |                |                       |                   |          |
| 5 260                                                                                               | 52  | 802.11a | 20               | 6                | 18.0                | 17.11             | 0.12             | Rear          | Ant1         | 86.0       | 15            | 0.204                                    | 0.094            | 1.227          | 1.163                 | 0.134             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20               | 6                | 18.0                | 17.11             | 0.01             | Front         | Ant1         | 86.0       | 15            | 0.0792                                   | 0.029            | 1.227          | 1.163                 | 0.041             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 18.0                | 17.38             | -0.14            | Rear          | Ant1         | 86.0       | 15            | 0.417                                    | 0.185            | 1.153          | 1.163                 | 0.248             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 18.0                | 17.38             | 0.01             | Front         | Ant1         | 86.0       | 15            | 0.0939                                   | 0.040            | 1.153          | 1.163                 | 0.054             | -        |
| 5 785                                                                                               | 157 | 802.11a | 20               | 6                | 18.0                | 17.82             | -0.15            | Rear          | Ant1         | 86.0       | 15            | 0.379                                    | 0.172            | 1.042          | 1.163                 | 0.208             | -        |
| 5 785                                                                                               | 157 | 802.11a | 20               | 6                | 18.0                | 17.82             | 0.01             | Front         | Ant1         | 86.0       | 15            | 0.0944                                   | 0.036            | 1.042          | 1.163                 | 0.044             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20               | 6                | 18.0                | 17.47             | -0.12            | Rear          | Ant2         | 86.0       | 15            | 0.847                                    | 0.391            | 1.130          | 1.163                 | 0.514             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20               | 6                | 18.0                | 17.47             | 0.01             | Front         | Ant2         | 86.0       | 15            | 0.0245                                   | 0.00806          | 1.130          | 1.163                 | 0.011             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 18.0                | 17.35             | 0.01             | Rear          | Ant2         | 86.0       | 15            | 0.618                                    | 0.268            | 1.161          | 1.163                 | 0.362             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 18.0                | 17.35             | -0.01            | Front         | Ant2         | 86.0       | 15            | 0.0266                                   | 0.00511          | 1.161          | 1.163                 | 0.007             | -        |
| 5 785                                                                                               | 157 | 802.11a | 20               | 6                | 18.0                | 17.40             | 0.08             | Rear          | Ant2         | 86.0       | 15            | 0.485                                    | 0.205            | 1.148          | 1.163                 | 0.274             | -        |
| 5 785                                                                                               | 157 | 802.11a | 20               | 6                | 18.0                | 17.40             | -0.05            | Front         | Ant2         | 86.0       | 15            | 0.00178                                  | 0.000495         | 1.148          | 1.163                 | 0.001             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20               | 6                | 21.0                | 20.30             | 0.05             | Rear          | MIMO         | 86.0       | 15            | 0.993                                    | 0.463            | 1.227          | 1.163                 | <b>0.661</b>      | 35       |
| 5 260                                                                                               | 52  | 802.11a | 20               | 6                | 21.0                | 20.30             | 0.01             | Front         | MIMO         | 86.0       | 15            | 0.0933                                   | 0.042            | 1.227          | 1.163                 | 0.060             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 21.0                | 20.37             | -0.11            | Rear          | MIMO         | 86.0       | 15            | 0.813                                    | 0.350            | 1.161          | 1.163                 | 0.473             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 21.0                | 20.37             | 0.01             | Front         | MIMO         | 86.0       | 15            | 0.102                                    | 0.026            | 1.161          | 1.163                 | 0.035             | -        |
| 5 785                                                                                               | 157 | 802.11a | 20               | 6                | 21.0                | 20.63             | -0.14            | Rear          | MIMO         | 86.0       | 15            | 0.743                                    | 0.317            | 1.148          | 1.163                 | 0.423             | -        |
| 5 785                                                                                               | 157 | 802.11a | 20               | 6                | 21.0                | 20.63             | -0.01            | Front         | MIMO         | 86.0       | 15            | 0.0696                                   | 0.023            | 1.148          | 1.163                 | 0.031             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |              |            |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                   |          |

### NII Body-Worn SAR - RSDB

| Frequency                                                                                           |     | Mode     | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|----------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------|---------------|------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                 | Ch. |          |                  |                  |                     |                   |                  |               |              |            |               |                                          |                  |                |                       |                   |          |
| 5 270                                                                                               | 54  | 802.11n  | 40               | MCS0             | 14.0                | 13.00             | 0.01             | Rear          | Ant1         | 90.3       | 15            | 0.0924                                   | 0.032            | 1.259          | 1.107                 | 0.045             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40               | MCS0             | 14.0                | 13.00             | 0.01             | Front         | Ant1         | 90.3       | 15            | 0.0307                                   | 0.010            | 1.259          | 1.107                 | 0.014             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80               | MCS0             | 14.0                | 13.38             | 0.01             | Rear          | Ant1         | 91.0       | 15            | 0.089                                    | 0.033            | 1.153          | 1.099                 | 0.042             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80               | MCS0             | 14.0                | 13.38             | 0.01             | Front         | Ant1         | 91.0       | 15            | 0.023                                    | 0.00727          | 1.153          | 1.099                 | 0.009             | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80               | MCS0             | 14.0                | 13.51             | 0.08             | Rear          | Ant1         | 91.0       | 15            | 0.079                                    | 0.030            | 1.119          | 1.099                 | 0.037             | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80               | MCS0             | 14.0                | 13.51             | 0.01             | Front         | Ant1         | 91.0       | 15            | 0.008                                    | 0.0000262        | 1.119          | 1.099                 | 0.000             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40               | MCS0             | 14.0                | 12.11             | -0.19            | Rear          | Ant2         | 90.3       | 15            | 0.366                                    | 0.158            | 1.545          | 1.107                 | 0.270             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40               | MCS0             | 14.0                | 12.11             | 0.01             | Front         | Ant2         | 90.3       | 15            | 0.0342                                   | 0.00388          | 1.545          | 1.107                 | 0.007             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80               | MCS0             | 14.0                | 12.53             | -0.14            | Rear          | Ant2         | 91.0       | 15            | 0.255                                    | 0.101            | 1.403          | 1.099                 | 0.156             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80               | MCS0             | 14.0                | 12.53             | -0.15            | Front         | Ant2         | 91.0       | 15            | 0.0178                                   | 0.010            | 1.403          | 1.099                 | 0.015             | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80               | MCS0             | 14.0                | 12.54             | 0.01             | Rear          | Ant2         | 91.0       | 15            | 0.224                                    | 0.086            | 1.400          | 1.099                 | 0.132             | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80               | MCS0             | 14.0                | 12.54             | 0.01             | Front         | Ant2         | 91.0       | 15            | 0.006                                    | 0.0000102        | 1.400          | 1.099                 | 0.000             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40               | MCS0             | 17.0                | 15.59             | -0.06            | Rear          | MIMO         | 90.3       | 15            | 0.532                                    | 0.226            | 1.545          | 1.107                 | <b>0.387</b>      | 36       |
| 5 270                                                                                               | 54  | 802.11n  | 40               | MCS0             | 17.0                | 15.59             | 0.01             | Front         | MIMO         | 90.3       | 15            | 0.0268                                   | 0.00931          | 1.545          | 1.107                 | 0.016             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80               | MCS0             | 17.0                | 15.99             | -0.15            | Rear          | MIMO         | 91.0       | 15            | 0.274                                    | 0.106            | 1.403          | 1.099                 | 0.163             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80               | MCS0             | 17.0                | 15.99             |                  | Front         | MIMO         | 91.0       | 15            | 0.0389                                   |                  |                |                       |                   | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80               | MCS0             | 17.0                | 16.06             | 0.07             | Rear          | MIMO         | 91.0       | 15            | 0.27                                     | 0.105            | 1.400          | 1.099                 | 0.162             | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80               | MCS0             | 17.0                | 16.06             | 0.01             | Front         | MIMO         | 91.0       | 15            | 0.034                                    | 0.00193          | 1.400          | 1.099                 | 0.003             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |                  |                  |                     |                   |                  |               |              |            |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                   |          |

### DSS Body-Worn SAR

| Frequency                                                                                           |     | Mode          | Tune-Up Limit | Meas. Power | Power Drift | Test Position | Distance | Meas. SAR                                       | Scaling Factor | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|---------------|---------------|-------------|-------------|---------------|----------|-------------------------------------------------|----------------|----------------|--------------|----------|
| MHz                                                                                                 | Ch. |               | (dBm)         | (dBm)       | (dB)        |               | (mm)     | (W/kg)                                          |                | (Duty)         | (W/kg)       |          |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.50         | 17.40       | 0.11        | Rear          | 15       | 0.123                                           | 1.023          | 1.298          | <b>0.163</b> | 37       |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.50         | 17.40       | 0.09        | Front         | 15       | 0.070                                           | 1.023          | 1.298          | 0.093        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |               |               |             |             |               |          | Body<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |                |                |              |          |

### 13.3 Hotspot SAR Measurement Results

| GSM 850 Hotspot SAR                                                                                 |     |          |               |             |             |                                          |            |          |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|-----|----------|---------------|-------------|-------------|------------------------------------------|------------|----------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |     | Mode     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                 | Ch. |          | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.5          | 29.65       | 0.06        | Rear                                     | 1:2.77     | 10       | 0.513     | 1.216          | <b>0.624</b> | 38       |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.5          | 29.65       | 0.07        | Front                                    | 1:2.77     | 10       | 0.430     | 1.216          | 0.523        | -        |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.5          | 29.65       | 0.07        | Left                                     | 1:2.77     | 10       | 0.238     | 1.216          | 0.289        | -        |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.5          | 29.65       | 0.10        | Right                                    | 1:2.77     | 10       | 0.076     | 1.216          | 0.092        | -        |
| 836.6                                                                                               | 190 | GPRS 3Tx | 30.5          | 29.65       | 0.16        | Bottom                                   | 1:2.77     | 10       | 0.394     | 1.216          | 0.479        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |           |                |              |          |

| GSM 1900 Hotspot SAR                                                                                |     |          |               |             |             |                                          |            |          |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|-----|----------|---------------|-------------|-------------|------------------------------------------|------------|----------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |     | Mode     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                 | Ch. |          | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1 880                                                                                               | 661 | GPRS 4Tx | 22.5          | 20.8        | 0.14        | Rear                                     | 1:2.075    | 10       | 0.283     | 1.479          | 0.419        | -        |
| 1 880                                                                                               | 661 | GPRS 4Tx | 22.5          | 20.8        | 0.19        | Front                                    | 1:2.075    | 10       | 0.228     | 1.479          | 0.337        | -        |
| 1 880                                                                                               | 661 | GPRS 4Tx | 22.5          | 20.8        | -0.08       | Left                                     | 1:2.075    | 10       | 0.029     | 1.479          | 0.043        | -        |
| 1 880                                                                                               | 661 | GPRS 4Tx | 22.5          | 20.8        | 0.17        | Right                                    | 1:2.075    | 10       | 0.039     | 1.479          | 0.058        | -        |
| 1 850.2                                                                                             | 512 | GPRS 4Tx | 22.5          | 21.06       | 0.12        | Bottom                                   | 1:2.075    | 10       | 0.543     | 1.393          | 0.756        | -        |
| 1 880                                                                                               | 661 | GPRS 4Tx | 22.5          | 20.80       | 0.19        | Bottom                                   | 1:2.075    | 10       | 0.566     | 1.479          | 0.837        | -        |
| 1 909.8                                                                                             | 810 | GPRS 4Tx | 22.5          | 20.83       | 0.10        | Bottom                                   | 1:2.075    | 10       | 0.746     | 1.469          | <b>1.096</b> | 39       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |           |                |              |          |

| UMTS850 Hotspot SAR                                                                                 |      |      |               |             |             |                                          |            |          |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|------------------------------------------|------------|----------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| Mhz                                                                                                 | Ch.  |      | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | -0.05       | Rear                                     | 1:1        | 10       | 0.462     | 1.084          | <b>0.501</b> | 40       |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | 0.01        | Front                                    | 1:1        | 10       | 0.349     | 1.084          | 0.378        | -        |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | 0.01        | Left                                     | 1:1        | 10       | 0.189     | 1.084          | 0.205        | -        |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | 0.05        | Right                                    | 1:1        | 10       | 0.092     | 1.084          | 0.100        | -        |
| 836.6                                                                                               | 4183 | RMC  | 25.0          | 24.65       | 0.17        | Bottom                                   | 1:1        | 10       | 0.303     | 1.084          | 0.328        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |           |                |              |          |

| UMTS1700 Hotspot SAR                                                                                |      |      |               |             |             |                                          |            |          |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|------------------------------------------|------------|----------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| Mhz                                                                                                 | Ch.  |      | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1 732.4                                                                                             | 1412 | RMC  | 20.00         | 19.64       | 0.04        | Rear                                     | 1:1        | 10       | 0.523     | 1.086          | 0.568        | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 20.00         | 19.64       | 0.01        | Front                                    | 1:1        | 10       | 0.395     | 1.086          | 0.429        | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 20.00         | 19.64       | 0.11        | Left                                     | 1:1        | 10       | 0.035     | 1.086          | 0.038        | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 20.00         | 19.64       | 0.12        | Right                                    | 1:1        | 10       | 0.061     | 1.086          | 0.066        | -        |
| 1 712.4                                                                                             | 1312 | RMC  | 20.00         | 19.36       | 0.18        | Bottom                                   | 1:1        | 10       | 0.819     | 1.159          | <b>0.949</b> | 41       |
| 1 732.4                                                                                             | 1412 | RMC  | 20.00         | 19.64       | 0.15        | Bottom                                   | 1:1        | 10       | 0.795     | 1.086          | 0.864        | -        |
| 1 752.8                                                                                             | 1513 | RMC  | 20.00         | 19.73       | 0.14        | Bottom                                   | 1:1        | 10       | 0.733     | 1.064          | 0.780        | -        |
| 1 712.4                                                                                             | 1312 | RMC  | 20.00         | 19.36       | 0.15        | Bottom                                   | 1:1        | 10       | 0.818     | 1.159          | 0.948        | *        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |           |                |              |          |

Note: \* Data entry indicate Variability measurement.

| UMTS1900 Hotspot SAR                                                                                |      |      |               |             |             |                                          |            |          |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|------------------------------------------|------------|----------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| Mhz                                                                                                 | Ch.  |      | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1 880                                                                                               | 9400 | RMC  | 20.00         | 19.26       | 0.06        | Rear                                     | 1:1        | 10       | 0.426     | 1.186          | 0.505        | -        |
| 1 880                                                                                               | 9400 | RMC  | 20.00         | 19.26       | -0.05       | Front                                    | 1:1        | 10       | 0.329     | 1.186          | 0.390        | -        |
| 1 880                                                                                               | 9400 | RMC  | 20.00         | 19.26       | 0.18        | Left                                     | 1:1        | 10       | 0.034     | 1.186          | 0.040        | -        |
| 1 880                                                                                               | 9400 | RMC  | 20.00         | 19.26       | 0.11        | Right                                    | 1:1        | 10       | 0.035     | 1.186          | 0.042        | -        |
| 1 852.4                                                                                             | 9262 | RMC  | 20.00         | 18.98       | -0.06       | Bottom                                   | 1:1        | 10       | 0.746     | 1.265          | 0.943        | -        |
| 1 880                                                                                               | 9400 | RMC  | 20.00         | 19.26       | 0.12        | Bottom                                   | 1:1        | 10       | 0.743     | 1.186          | 0.881        | -        |
| 1 907.6                                                                                             | 9538 | RMC  | 20.00         | 18.86       | 0.09        | Bottom                                   | 1:1        | 10       | 0.806     | 1.300          | 1.048        | -        |
| 1 907.6                                                                                             | 9538 | RMC  | 20.00         | 18.86       | 0.18        | Bottom                                   | 1:1        | 10       | 0.828     | 1.300          | <b>1.077</b> | 42*      |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |           |                |              |          |

Note: \* Data entry indicate Variability measurement.



## LTE Band 2 Hotspot SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                       | RB   | RB     | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|-------------------------------------------|------|--------|------------|----------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                      | Size | offset |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.11       | 0.11        | Rear          | 0                                         | 1    | 0      | 1:1        | 10       | 0.342     | 1.094          | 0.374        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.09       | 0.13        | Rear          | 0                                         | 50   | 0      | 1:1        | 10       | 0.398     | 1.099          | 0.437        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.11       | 0.12        | Front         | 0                                         | 1    | 0      | 1:1        | 10       | 0.323     | 1.094          | 0.353        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.09       | 1.75        | Front         | 0                                         | 50   | 0      | 1:1        | 10       | 0.321     | 1.099          | 0.353        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.11       | 0.15        | Left          | 0                                         | 1    | 0      | 1:1        | 10       | 0.031     | 1.094          | 0.034        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.09       | -0.07       | Left          | 0                                         | 50   | 0      | 1:1        | 10       | 0.031     | 1.099          | 0.034        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.11       | -0.17       | Right         | 0                                         | 1    | 0      | 1:1        | 10       | 0.052     | 1.094          | 0.057        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.09       | -0.16       | Right         | 0                                         | 50   | 0      | 1:1        | 10       | 0.052     | 1.099          | 0.057        | -        |
| 1860                                                                                                | 18700 | QPSK | 20         | 19.5          | 19.00       | -0.14       | Bottom        | 0                                         | 1    | 0      | 1:1        | 10       | 0.553     | 1.122          | 0.620        | -        |
| 1880                                                                                                | 18900 | QPSK | 20         | 19.5          | 18.68       | -0.18       | Bottom        | 0                                         | 1    | 0      | 1:1        | 10       | 0.559     | 1.208          | 0.675        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.11       | -0.01       | Bottom        | 0                                         | 1    | 0      | 1:1        | 10       | 0.921     | 1.094          | <b>1.008</b> | 43       |
| 1860                                                                                                | 18700 | QPSK | 20         | 19.5          | 19.01       | -0.17       | Bottom        | 0                                         | 50   | 0      | 1:1        | 10       | 0.550     | 1.119          | 0.615        | -        |
| 1880                                                                                                | 18900 | QPSK | 20         | 19.5          | 18.65       | -0.18       | Bottom        | 0                                         | 50   | 0      | 1:1        | 10       | 0.556     | 1.216          | 0.676        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.09       | -0.02       | Bottom        | 0                                         | 50   | 0      | 1:1        | 10       | 0.914     | 1.099          | 1.004        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.04       | -0.16       | Bottom        | 0                                         | 100  | 0      | 1:1        | 10       | 0.593     | 1.112          | 0.659        | -        |
| 1900                                                                                                | 19100 | QPSK | 20         | 19.5          | 19.11       | -0.14       | Bottom        | 0                                         | 1    | 0      | 1:1        | 10       | 0.864     | 1.094          | 0.945        | *        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 10 gram |      |        |            |          |           |                |              |          |

Note: \* Data entry indicate Variability measurement.

### LTE Band 5 Hotspot SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 836.5                                                                                               | 20525 | QPSK | 10         | 25.0          | 24.78       | 0.06        | Rear          | 0                                        | 1       | 0         | 1:1        | 10       | 0.613     | 1.052          | <b>0.645</b> | 44       |
| 836.5                                                                                               | 20525 | QPSK | 10         | 24.0          | 22.71       | -0.06       | Rear          | 1                                        | 25      | 0         | 1:1        | 10       | 0.406     | 1.346          | 0.546        | -        |
| 836.5                                                                                               | 20525 | QPSK | 10         | 25.0          | 24.78       | 0.09        | Front         | 0                                        | 1       | 0         | 1:1        | 10       | 0.384     | 1.052          | 0.404        | -        |
| 836.5                                                                                               | 20525 | QPSK | 10         | 24.0          | 22.71       | 0.04        | Front         | 1                                        | 25      | 0         | 1:1        | 10       | 0.252     | 1.346          | 0.339        | -        |
| 836.5                                                                                               | 20525 | QPSK | 10         | 25.0          | 24.78       | -0.05       | Left          | 0                                        | 1       | 0         | 1:1        | 10       | 0.174     | 1.052          | 0.183        | -        |
| 836.5                                                                                               | 20525 | QPSK | 10         | 24.0          | 22.71       | -0.07       | Left          | 1                                        | 25      | 0         | 1:1        | 10       | 0.113     | 1.346          | 0.152        | -        |
| 836.5                                                                                               | 20525 | QPSK | 10         | 25.0          | 24.78       | -0.16       | Right         | 0                                        | 1       | 0         | 1:1        | 10       | 0.080     | 1.052          | 0.084        | -        |
| 836.5                                                                                               | 20525 | QPSK | 10         | 24.0          | 22.71       | -0.14       | Right         | 1                                        | 25      | 0         | 1:1        | 10       | 0.052     | 1.346          | 0.070        | -        |
| 836.5                                                                                               | 20525 | QPSK | 10         | 25.0          | 24.78       | 0.04        | Bottom        | 0                                        | 1       | 0         | 1:1        | 10       | 0.337     | 1.052          | 0.355        | -        |
| 836.5                                                                                               | 20525 | QPSK | 10         | 24.0          | 22.71       | -0.07       | Bottom        | 1                                        | 25      | 0         | 1:1        | 10       | 0.219     | 1.346          | 0.295        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### LTE Band 12 Hotspot SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 707.5                                                                                               | 23095 | QPSK | 10         | 24.5          | 24.29       | 0.01        | Rear          | 0                                        | 1       | 0         | 1:1        | 10       | 0.209     | 1.050          | <b>0.219</b> | 45       |
| 707.5                                                                                               | 23095 | QPSK | 10         | 23.5          | 22.86       | -0.05       | Rear          | 1                                        | 25      | 0         | 1:1        | 10       | 0.156     | 1.159          | 0.181        | -        |
| 707.5                                                                                               | 23095 | QPSK | 10         | 24.5          | 24.29       | -0.05       | Front         | 0                                        | 1       | 0         | 1:1        | 10       | 0.099     | 1.050          | 0.104        | -        |
| 707.5                                                                                               | 23095 | QPSK | 10         | 23.5          | 22.86       | -0.03       | Front         | 1                                        | 25      | 0         | 1:1        | 10       | 0.074     | 1.159          | 0.086        | -        |
| 707.5                                                                                               | 23095 | QPSK | 10         | 24.5          | 24.29       | 0.06        | Left          | 0                                        | 1       | 0         | 1:1        | 10       | 0.102     | 1.050          | 0.107        | -        |
| 707.5                                                                                               | 23095 | QPSK | 10         | 23.5          | 22.86       | 0.02        | Left          | 1                                        | 25      | 0         | 1:1        | 10       | 0.077     | 1.159          | 0.089        | -        |
| 707.5                                                                                               | 23095 | QPSK | 10         | 24.5          | 24.29       | -0.02       | Right         | 0                                        | 1       | 0         | 1:1        | 10       | 0.053     | 1.050          | 0.056        | -        |
| 707.5                                                                                               | 23095 | QPSK | 10         | 23.5          | 22.86       | 0.05        | Right         | 1                                        | 25      | 0         | 1:1        | 10       | 0.038     | 1.159          | 0.044        | -        |
| 707.5                                                                                               | 23095 | QPSK | 10         | 24.5          | 24.29       | -0.09       | Bottom        | 0                                        | 1       | 0         | 1:1        | 10       | 0.102     | 1.050          | 0.107        | -        |
| 707.5                                                                                               | 23095 | QPSK | 10         | 23.5          | 22.86       | -0.01       | Bottom        | 1                                        | 25      | 0         | 1:1        | 10       | 0.077     | 1.159          | 0.089        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### LTE Band 13 Hotspot SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | -0.04       | Rear          | 0                                        | 1       | 49        | 1:1        | 10       | 0.253     | 1.227          | <b>0.310</b> | 46       |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | -0.04       | Rear          | 1                                        | 25      | 24        | 1:1        | 10       | 0.179     | 1.349          | 0.241        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | -0.05       | Front         | 0                                        | 1       | 49        | 1:1        | 10       | 0.183     | 1.227          | 0.225        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | 0.02        | Front         | 1                                        | 25      | 24        | 1:1        | 10       | 0.159     | 1.349          | 0.214        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | -0.01       | Left          | 0                                        | 1       | 49        | 1:1        | 10       | 0.138     | 1.227          | 0.169        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | -0.07       | Left          | 1                                        | 25      | 24        | 1:1        | 10       | 0.088     | 1.349          | 0.119        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | 0.02        | Right         | 0                                        | 1       | 49        | 1:1        | 10       | 0.059     | 1.227          | 0.072        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | -0.02       | Right         | 1                                        | 25      | 24        | 1:1        | 10       | 0.048     | 1.349          | 0.065        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 25.0          | 24.11       | 0.02        | Bottom        | 0                                        | 1       | 49        | 1:1        | 10       | 0.184     | 1.227          | 0.226        | -        |
| 782                                                                                                 | 23230 | QPSK | 10         | 24.0          | 22.70       | -0.01       | Bottom        | 1                                        | 25      | 24        | 1:1        | 10       | 0.129     | 1.349          | 0.174        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### LTE Band 25 Hotspot SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Distance | Meas. SAR    | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|--------------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)       |                | (W/kg)       |          |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | -0.13       | Rear          | 0                                        | 1       | 49        | 1:1        | 10       | 0.374        | 1.084          | 0.405        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.05        | Rear          | 0                                        | 50      | 0         | 1:1        | 10       | 0.378        | 1.084          | 0.410        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | -0.01       | Front         | 0                                        | 1       | 49        | 1:1        | 10       | 0.377        | 1.084          | 0.409        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.13        | Front         | 0                                        | 50      | 0         | 1:1        | 10       | 0.399        | 1.084          | 0.432        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.11        | Left          | 0                                        | 1       | 49        | 1:1        | 10       | 0.043        | 1.084          | 0.047        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.14        | Left          | 0                                        | 50      | 0         | 1:1        | 10       | 0.045        | 1.084          | 0.049        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.16        | Right         | 0                                        | 1       | 49        | 1:1        | 10       | 0.047        | 1.084          | 0.051        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.01        | Right         | 0                                        | 50      | 0         | 1:1        | 10       | 0.049        | 1.084          | 0.053        | -        |
| 1 860                                                                                               | 26140 | QPSK | 20         | 19.5          | 18.97       | 0.17        | Bottom        | 0                                        | 1       | 99        | 1:1        | 10       | 0.801        | 1.130          | 0.905        |          |
| 1 882.5                                                                                             | 26365 | QPSK | 20         | 19.5          | 18.67       | 0.11        | Bottom        | 0                                        | 1       | 0         | 1:1        | 10       | 0.778        | 1.211          | 0.942        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.13        | Bottom        | 0                                        | 1       | 49        | 1:1        | 10       | 0.934        | 1.084          | 1.012        | -        |
| 1 860                                                                                               | 26140 | QPSK | 20         | 19.5          | 19.02       | 0.18        | Bottom        | 0                                        | 50      | 49        | 1:1        | 10       | 0.812        | 1.117          | 0.907        |          |
| 1 882.5                                                                                             | 26365 | QPSK | 20         | 19.5          | 18.68       | 0.13        | Bottom        | 0                                        | 50      | 0         | 1:1        | 10       | 0.793        | 1.208          | 0.958        | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.17        | Bottom        | 0                                        | 50      | 0         | 1:1        | 10       | <b>0.955</b> | 1.084          | 1.035        | 47       |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.14       | 0.15        | Bottom        | 0                                        | 100     | 0         | 1:1        | 10       | 0.954        | 1.086          | <b>1.036</b> | 48       |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5          | 19.15       | 0.11        | Bottom        | 0                                        | 50      | 0         | 1:1        | 10       | 0.952        | 1.084          | 1.032        | *        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |              |                |              |          |

Note: \* Data entry indicate Variability measurement.

### LTE Band 26 Hotspot SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | 0.03        | Rear          | 0                                        | 1       | 0         | 1:1        | 10       | 0.380     | 1.216          | <b>0.462</b> | 49       |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | -0.17       | Rear          | 1                                        | 36      | 0         | 1:1        | 10       | 0.293     | 1.368          | 0.401        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | -0.02       | Front         | 0                                        | 1       | 0         | 1:1        | 10       | 0.284     | 1.216          | 0.345        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | -0.01       | Front         | 1                                        | 36      | 0         | 1:1        | 10       | 0.220     | 1.368          | 0.301        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | -0.05       | Left          | 0                                        | 1       | 0         | 1:1        | 10       | 0.143     | 1.216          | 0.174        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | -0.11       | Left          | 1                                        | 36      | 0         | 1:1        | 10       | 0.108     | 1.368          | 0.148        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | -0.15       | Right         | 0                                        | 1       | 0         | 1:1        | 10       | 0.068     | 1.216          | 0.083        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | -0.15       | Right         | 1                                        | 36      | 0         | 1:1        | 10       | 0.051     | 1.368          | 0.070        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 25.0          | 24.15       | 0.03        | Bottom        | 0                                        | 1       | 0         | 1:1        | 10       | 0.279     | 1.216          | 0.339        | -        |
| 831.5                                                                                               | 26865 | QPSK | 15         | 24.0          | 22.64       | 0.03        | Bottom        | 1                                        | 36      | 0         | 1:1        | 10       | 0.208     | 1.368          | 0.285        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### LTE TDD Band 41 Hotspot SAR

| Frequency                                                                                           |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| MHz                                                                                                 | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.16       | -0.14       | Rear          | 0                                        | 1       | 0         | 1:1.58     | 10       | 0.425     | 1.057          | 0.449        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.24       | 0.12        | Rear          | 0                                        | 50      | 0         | 1:1.58     | 10       | 0.433     | 1.038          | 0.449        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.16       | -0.18       | Front         | 0                                        | 1       | 0         | 1:1.58     | 10       | 0.321     | 1.057          | 0.339        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.24       | -0.08       | Front         | 0                                        | 50      | 0         | 1:1.58     | 10       | 0.322     | 1.038          | 0.334        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.16       | -0.01       | Right         | 0                                        | 1       | 0         | 1:1.58     | 10       | 0.310     | 1.057          | 0.328        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.24       | -0.14       | Right         | 0                                        | 50      | 0         | 1:1.58     | 10       | 0.221     | 1.038          | 0.229        | -        |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.16       | 0.15        | Bottom        | 0                                        | 1       | 0         | 1:1.58     | 10       | 0.547     | 1.057          | <b>0.578</b> | 50       |
| 2 680                                                                                               | 41490 | QPSK | 20         | 23.4          | 23.24       | -0.11       | Bottom        | 0                                        | 50      | 0         | 1:1.58     | 10       | 0.502     | 1.038          | 0.521        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

| LTE Band 66 Hotspot SAR                                                                             |        |      |            |               |             |             |               |                                          |      |        |            |          |           |                |              |          |
|-----------------------------------------------------------------------------------------------------|--------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|------|--------|------------|----------|-----------|----------------|--------------|----------|
| Frequency                                                                                           |        | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB   | RB     | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                 | Ch.    |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     | Size | offset |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.07       | -0.05       | Rear          | 0                                        | 1    | 99     | 1:1        | 10       | 0.433     | 1.104          | 0.478        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.01       | 0.01        | Rear          | 0                                        | 50   | 0      | 1:1        | 10       | 0.437     | 1.119          | 0.489        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.07       | 0.03        | Front         | 0                                        | 1    | 99     | 1:1        | 10       | 0.422     | 1.104          | 0.466        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.01       | 0.01        | Front         | 0                                        | 50   | 0      | 1:1        | 10       | 0.379     | 1.119          | 0.424        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.07       | 0.07        | Left          | 0                                        | 1    | 99     | 1:1        | 10       | 0.057     | 1.104          | 0.063        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.01       | 0.10        | Left          | 0                                        | 50   | 0      | 1:1        | 10       | 0.059     | 1.119          | 0.066        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.07       | 0.09        | Right         | 0                                        | 1    | 99     | 1:1        | 10       | 0.084     | 1.104          | 0.093        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.01       | 0.17        | Right         | 0                                        | 50   | 0      | 1:1        | 10       | 0.092     | 1.119          | 0.103        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.07       | 0.16        | Bottom        | 0                                        | 1    | 99     | 1:1        | 10       | 0.839     | 1.104          | 0.926        | -        |
| 1 745                                                                                               | 132322 | QPSK | 20         | 20.5          | 19.52       | 0.17        | Bottom        | 0                                        | 1    | 99     | 1:1        | 10       | 0.728     | 1.253          | 0.912        | -        |
| 1 770                                                                                               | 132572 | QPSK | 20         | 20.5          | 19.76       | 0.14        | Bottom        | 0                                        | 1    | 99     | 1:1        | 10       | 0.750     | 1.186          | 0.889        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 20.01       | 0.12        | Bottom        | 0                                        | 50   | 0      | 1:1        | 10       | 0.846     | 1.119          | 0.947        | -        |
| 1 745                                                                                               | 132322 | QPSK | 20         | 20.5          | 19.48       | 0.10        | Bottom        | 0                                        | 50   | 0      | 1:1        | 10       | 0.737     | 1.265          | 0.932        | -        |
| 1 770                                                                                               | 132572 | QPSK | 20         | 20.5          | 19.66       | 0.17        | Bottom        | 0                                        | 50   | 0      | 1:1        | 10       | 0.743     | 1.213          | 0.901        | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 19.96       | 0.17        | Bottom        | 0                                        | 100  | 0      | 1:1        | 10       | 0.857     | 1.132          | <b>0.970</b> | 51       |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5          | 19.96       | 0.16        | Bottom        | 0                                        | 100  | 0      | 1:1        | 10       | 0.853     | 1.132          | 0.966        | *        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |      |        |            |          |           |                |              |          |

Note: \* Data entry indicate Variability measurement.

| DTS Hotspot SAR                                                                                     |     |         |                  |                   |                     |                   |                  |               |              |                                          |               |                           |                  |                |                       |                   |          |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------------|-------------------|---------------------|-------------------|------------------|---------------|--------------|------------------------------------------|---------------|---------------------------|------------------|----------------|-----------------------|-------------------|----------|
| *Frequency                                                                                          |     | Mode    | Band width (MHz) | Data Rate (Mbps ) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle                               | Distance (mm) | Area Scan Peak SAR (W/kg) | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch. |         |                  |                   |                     |                   |                  |               |              |                                          |               |                           |                  |                |                       |                   |          |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                 | 20.0                | 19.05             | -0.02            | Rear          | Ant1         | 99.1                                     | 10            | 0.414                     | 0.238            | 1.245          | 1.009                 | 0.299             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                 | 20.0                | 19.05             | 0.08             | Front         | Ant1         | 99.1                                     | 10            | 0.227                     | 0.125            | 1.245          | 1.009                 | 0.157             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                 | 20.0                | 19.05             | 0.04             | Left          | Ant1         | 99.1                                     | 10            | 0.0896                    | 0.053            | 1.245          | 1.009                 | 0.067             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                 | 20.0                | 19.05             | 0.05             | Top           | Ant1         | 99.1                                     | 10            | 0.557                     | 0.349            | 1.245          | 1.009                 | 0.438             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                 | 20.0                | 19.45             | 0.11             | Rear          | Ant2         | 99.1                                     | 10            | 0.52                      | 0.314            | 1.135          | 1.009                 | 0.360             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                 | 20.0                | 19.45             | 0.09             | Front         | Ant2         | 99.1                                     | 10            | 0.0581                    | 0.025            | 1.135          | 1.009                 | 0.029             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                 | 20.0                | 19.45             | 0.11             | Left          | Ant2         | 99.1                                     | 10            | 0.105                     | 0.058            | 1.135          | 1.009                 | 0.066             | -        |
| 2 462                                                                                               | 11  | 802.11b | 20               | 1                 | 20.0                | 19.45             | 0.10             | Top           | Ant2         | 99.1                                     | 10            | 0.0814                    | 0.045            | 1.135          | 1.009                 | 0.052             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                 | 20.0                | 19.72             | 0.10             | Rear          | MIMO         | 93.5                                     | 10            | 0.614                     | 0.388            | 1.094          | 1.069                 | 0.454             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                 | 20.0                | 19.72             | -0.05            | Front         | MIMO         | 93.5                                     | 10            | 0.0668                    | 0.025            | 1.094          | 1.069                 | 0.029             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                 | 20.0                | 19.72             | 0.08             | Left          | MIMO         | 93.5                                     | 10            | 0.171                     | 0.102            | 1.094          | 1.069                 | 0.119             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                 | 20.0                | 19.72             | 0.09             | Top           | MIMO         | 93.5                                     | 10            | 0.709                     | 0.433            | 1.094          | 1.069                 | <b>0.506</b>      | 52       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                   |                     |                   |                  |               |              | Body<br>1.6 W/kg<br>Averaged over 1 gram |               |                           |                  |                |                       |                   |          |

| DTS Hotspot SAR RSDB                                                                                |     |         |                  |                  |                     |                   |                  |               |              |                                          |               |                           |                  |                |                       |                   |          |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------------------------------------|---------------|---------------------------|------------------|----------------|-----------------------|-------------------|----------|
| *Frequency                                                                                          |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle                               | Distance (mm) | Area Scan Peak SAR (W/kg) | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch. |         |                  |                  |                     |                   |                  |               |              |                                          |               |                           |                  |                |                       |                   |          |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.01             | Rear          | Ant1         | 99.1                                     | 10            | 0.203                     | 0.121            | 1.358          | 1.009                 | 0.166             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.01             | Front         | Ant1         | 99.1                                     | 10            | 0.11                      | 0.067            | 1.358          | 1.009                 | 0.092             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.03             | Left          | Ant1         | 99.1                                     | 10            | 0.036                     | 0.020            | 1.358          | 1.009                 | 0.027             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 15.67             | 0.16             | Top           | Ant1         | 99.1                                     | 10            | 0.279                     | 0.171            | 1.358          | 1.009                 | 0.234             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             | -0.09            | Rear          | Ant2         | 99.1                                     | 10            | 0.275                     | 0.149            | 1.253          | 1.009                 | 0.188             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             | 0.01             | Front         | Ant2         | 99.1                                     | 10            | 0.0188                    | 0.00349          | 1.253          | 1.009                 | 0.004             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             | 0.05             | Left          | Ant2         | 99.1                                     | 10            | 0.0668                    | 0.030            | 1.253          | 1.009                 | 0.038             | -        |
| 2 412                                                                                               | 1   | 802.11b | 20               | 1                | 17.0                | 16.02             | 0.14             | Top           | Ant2         | 99.1                                     | 10            | 0.0514                    | 0.020            | 1.253          | 1.009                 | 0.025             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 18.06             | -0.10            | Rear          | MIMO         | 93.5                                     | 10            | 0.307                     | 0.182            | 1.607          | 1.069                 | 0.313             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 18.06             | 0.01             | Front         | MIMO         | 93.5                                     | 10            | 0.135                     | 0.071            | 1.607          | 1.069                 | 0.122             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 18.06             | 0.03             | Left          | MIMO         | 93.5                                     | 10            | 0.075                     | 0.038            | 1.607          | 1.069                 | 0.065             | -        |
| 2 437                                                                                               | 6   | 802.11g | 20               | 6                | 20.0                | 18.06             | 0.09             | Top           | MIMO         | 93.5                                     | 10            | 0.451                     | 0.270            | 1.607          | 1.069                 | <b>0.464</b>      | 53       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |              | Body<br>1.6 W/kg<br>Averaged over 1 gram |               |                           |                  |                |                       |                   |          |

### 5 GHz WLAN Hotspot SAR

| Frequency                                                                                           |     | Mode    | Band width | Data Rate | Tune-Up Limit | Meas. Power | Power Drift | Test Position | Ant Config.                              | Duty Cycle | Distance | Area Scan Peak SAR | Meas. SAR | Scaling Factor | Scaling Factor (Duty) | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------|-----------|---------------|-------------|-------------|---------------|------------------------------------------|------------|----------|--------------------|-----------|----------------|-----------------------|--------------|----------|
| Mhz                                                                                                 | Ch. |         | (MHz)      | (Mbps)    | (dBm)         | (dBm)       | (dB)        |               |                                          |            | (mm)     | (W/kg)             | (W/kg)    |                |                       | (W/kg)       |          |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 18.0          | 17.82       | -0.09       | Rear          | Ant1                                     | 86.0       | 10       | 0.664              | 0.285     | 1.042          | 1.076                 | 0.320        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 18.0          | 17.82       | -0.01       | Front         | Ant1                                     | 86.0       | 10       | 0.158              | 0.071     | 1.042          | 1.076                 | 0.080        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 18.0          | 17.82       | 0.04        | Left          | Ant1                                     | 86.0       | 10       | 0.288              | 0.118     | 1.042          | 1.076                 | 0.132        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 18.0          | 17.82       | -0.17       | Top           | Ant1                                     | 86.0       | 10       | 0.209              | 0.093     | 1.042          | 1.076                 | 0.104        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 18.0          | 17.40       | -0.15       | Rear          | Ant2                                     | 86.0       | 10       | 0.914              | 0.370     | 1.148          | 1.076                 | 0.457        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 18.0          | 17.40       | -0.01       | Front         | Ant2                                     | 86.0       | 10       | 0.0376             | 0.013     | 1.148          | 1.076                 | 0.016        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 18.0          | 17.40       | 0.17        | Left          | Ant2                                     | 86.0       | 10       | 0.231              | 0.091     | 1.148          | 1.076                 | 0.121        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 18.0          | 17.40       | -0.15       | Top           | Ant2                                     | 86.0       | 10       | 0.0579             | 0.015     | 1.148          | 1.076                 | 0.019        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 21.0          | 20.63       | -0.19       | Rear          | MIMO                                     | 86.0       | 10       | 1.27               | 0.499     | 1.148          | 1.076                 | <b>0.616</b> | 55       |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 21.0          | 20.63       | -0.01       | Front         | MIMO                                     | 86.0       | 10       | 0.128              | 0.049     | 1.148          | 1.076                 | 0.061        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 21.0          | 20.63       | 0.14        | Left          | MIMO                                     | 86.0       | 10       | 0.257              | 0.113     | 1.148          | 1.076                 | 0.140        | -        |
| 5 785                                                                                               | 157 | 802.11a | 20         | 6         | 21.0          | 20.63       | -0.10       | Top           | MIMO                                     | 86.0       | 10       | 0.225              | 0.097     | 1.148          | 1.076                 | 0.120        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |            |           |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |                    |           |                |                       |              |          |

### 5 GHz WLAN Hotspot SAR - RSDB

| Frequency                                                                                           |     | Mode     | Band width | Data Rate | Tune-Up Limit | Meas. Power | Power Drift | Test Position | Ant Config.                              | Duty Cycle | Distance | Area Scan Peak SAR | Meas. SAR | Scaling Factor | Scaling Factor (Duty) | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|----------|------------|-----------|---------------|-------------|-------------|---------------|------------------------------------------|------------|----------|--------------------|-----------|----------------|-----------------------|--------------|----------|
| Mhz                                                                                                 | Ch. |          | (MHz)      | (Mbps)    | (dBm)         | (dBm)       | (dB)        |               |                                          |            | (mm)     | (W/kg)             | (W/kg)    |                |                       | (W/kg)       |          |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 14.0          | 13.51       | -0.15       | Rear          | Ant1                                     | 91.0       | 10       | 0.131              | 0.044     | 1.119          | 1.099                 | 0.054        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 14.0          | 13.51       | 0.01        | Front         | Ant1                                     | 91.0       | 10       | 0.065              | 0.00828   | 1.119          | 1.099                 | 0.010        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 14.0          | 13.51       | 0.16        | Left          | Ant1                                     | 91.0       | 10       | 0.139              | 0.050     | 1.119          | 1.099                 | 0.061        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 14.0          | 13.51       | 0.10        | Top           | Ant1                                     | 91.0       | 10       | 0.095              | 0.027     | 1.119          | 1.099                 | 0.033        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 14.0          | 12.54       | -0.13       | Rear          | Ant2                                     | 91.0       | 10       | 0.274              | 0.125     | 1.400          | 1.099                 | 0.192        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 14.0          | 12.54       | 0.01        | Front         | Ant2                                     | 91.0       | 10       | 0.0233             | 0.00267   | 1.400          | 1.099                 | 0.004        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 14.0          | 12.54       | 0.14        | Left          | Ant2                                     | 91.0       | 10       | 0.113              | 0.050     | 1.400          | 1.099                 | 0.077        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 14.0          | 12.54       | -0.12       | Top           | Ant2                                     | 91.0       | 10       | 0.0414             | 0.00814   | 1.400          | 1.099                 | 0.013        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 17.0          | 16.06       | -0.14       | Rear          | MIMO                                     | 91.0       | 10       | 0.335              | 0.135     | 1.400          | 1.099                 | <b>0.208</b> | 56       |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 17.0          | 16.06       | 0.01        | Front         | MIMO                                     | 91.0       | 10       | 0.0318             | 0.00506   | 1.400          | 1.099                 | 0.008        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 17.0          | 16.06       | 0.12        | Left          | MIMO                                     | 91.0       | 10       | 0.149              | 0.056     | 1.400          | 1.099                 | 0.086        | -        |
| 5 775                                                                                               | 155 | 802.11ac | 80         | MCS0      | 17.0          | 16.06       | -0.13       | Top           | MIMO                                     | 91.0       | 10       | 0.13               | 0.050     | 1.400          | 1.099                 | 0.077        | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |            |           |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |                    |           |                |                       |              |          |

### DSS Tethering SAR

| Frequency                                                                                           |     | Mode          | Tune-Up Limit | Meas. Power | Power Drift | Test Position | Distance                                        | Meas. SAR | Scaling Factor | Scaling Factor | Scaled SAR   | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|---------------|---------------|-------------|-------------|---------------|-------------------------------------------------|-----------|----------------|----------------|--------------|----------|
| Mhz                                                                                                 | Ch. |               | (dBm)         | (dBm)       | (dB)        |               | (mm)                                            | (W/kg)    |                | (Duty)         | (W/kg)       |          |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.50         | 17.40       | 0.08        | Rear          | 10                                              | 0.253     | 1.023          | 1.298          | 0.336        | -        |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.50         | 17.40       | 0.17        | Front         | 10                                              | 0.126     | 1.023          | 1.298          | 0.167        | -        |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.50         | 17.40       | 0.11        | Left          | 10                                              | 0.041     | 1.023          | 1.298          | 0.054        | -        |
| 2 480                                                                                               | 78  | Bluetooth DH5 | 17.50         | 17.40       | 0.02        | Top           | 10                                              | 0.329     | 1.023          | 1.298          | <b>0.437</b> | 57       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |               |               |             |             |               | Body<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |           |                |                |              |          |

### 13.4 Phablet SAR Measurement Considerations

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

As a result of scaling up the SAR value of the hotspot mode of GSM1900/UMTS1700/UMTS1900/LTE B2/B66 of this EUT to the maximum output Power including tolerance > 1.2W/kg, the Tablet SAR measurement was performed.

Because the Scaled Up SAR result of GSM1900/UMTS1700/UMTS1900/LTE B2/B25/B66 's Hotspot mode exceeded 1.2 W/kg, Phablet SAR were performed.

### 13.5 Phablet SAR Measurement Results

| GSM 1900 Phablet SAR 10g                                                                            |     |          |                    |                  |                  |               |                                           |            |               |                  |                |                   |          |
|-----------------------------------------------------------------------------------------------------|-----|----------|--------------------|------------------|------------------|---------------|-------------------------------------------|------------|---------------|------------------|----------------|-------------------|----------|
| Frequency                                                                                           |     | Mode     | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor                                    | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch. |          |                    |                  |                  |               |                                           |            |               |                  |                |                   |          |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5               | 27.81            | -0.04            | Rear          | OFF                                       | 1:4.15     | 8             | 0.426            | 1.172          | 0.499             | -        |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5               | 27.81            | 0.11             | Front         | OFF                                       | 1:4.15     | 6             | 0.557            | 1.172          | 0.653             | -        |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5               | 27.81            | 0.18             | Bottom        | OFF                                       | 1:4.15     | 12            | 0.510            | 1.172          | 0.598             | -        |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5               | 27.81            | 0.11             | Left          | N/A                                       | 1:4.15     | 0             | 0.117            | 1.172          | 0.137             | -        |
| 1 909.8                                                                                             | 810 | GPRS 2Tx | 28.5               | 27.81            | 0.13             | Right         | N/A                                       | 1:4.15     | 0             | 0.182            | 1.172          | 0.213             | -        |
| 1 880                                                                                               | 661 | GPRS 4Tx | 22.5               | 20.82            | 0.18             | Rear          | ON                                        | 1:2.07     | 0             | 0.565            | 1.472          | 0.832             | -        |
| 1 880                                                                                               | 661 | GPRS 4Tx | 22.5               | 20.82            | 0.01             | Front         | ON                                        | 1:2.07     | 0             | 0.732            | 1.472          | 1.078             | -        |
| 1 880                                                                                               | 661 | GPRS 4Tx | 22.5               | 20.82            | 0.13             | Bottom        | ON                                        | 1:2.07     | 0             | 0.902            | 1.472          | <b>1.328</b>      | 58       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |                    |                  |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |            |               |                  |                |                   |          |

| UMTS1700 Phablet SAR 10g                                                                            |      |      |                    |                  |                  |               |                                           |            |               |                  |                |                   |          |
|-----------------------------------------------------------------------------------------------------|------|------|--------------------|------------------|------------------|---------------|-------------------------------------------|------------|---------------|------------------|----------------|-------------------|----------|
| Frequency                                                                                           |      | Mode | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor                                    | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch.  |      |                    |                  |                  |               |                                           |            |               |                  |                |                   |          |
| 1732.4                                                                                              | 1412 | RMC  | 23.5               | 23.17            | 0.08             | Rear          | OFF                                       | 1:1        | 8             | 0.883            | 1.079          | 0.953             | -        |
| 1732.4                                                                                              | 1412 | RMC  | 23.5               | 23.17            | 0.05             | Front         | OFF                                       | 1:1        | 6             | 0.785            | 1.079          | 0.847             | -        |
| 1732.4                                                                                              | 1412 | RMC  | 23.5               | 23.17            | 0.04             | Bottom        | OFF                                       | 1:1        | 12            | 0.711            | 1.079          | 0.767             | -        |
| 1732.4                                                                                              | 1412 | RMC  | 23.5               | 23.17            | -0.07            | Left          | N/A                                       | 1:1        | 0             | 0.208            | 1.079          | 0.224             | -        |
| 1732.4                                                                                              | 1412 | RMC  | 23.5               | 23.17            | 0.05             | Right         | N/A                                       | 1:1        | 0             | 0.145            | 1.079          | 0.156             | -        |
| 1732.4                                                                                              | 1412 | RMC  | 20.0               | 19.55            | -0.14            | Rear          | ON                                        | 1:1        | 0             | 1.160            | 1.109          | 1.287             | -        |
| 1732.4                                                                                              | 1412 | RMC  | 20.0               | 19.55            | 0.01             | Front         | ON                                        | 1:1        | 0             | 1.150            | 1.109          | 1.276             | -        |
| 1732.4                                                                                              | 1412 | RMC  | 20.0               | 19.55            | 0.01             | Bottom        | ON                                        | 1:1        | 0             | 1.690            | 1.109          | <b>1.875</b>      | 59       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |                    |                  |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |            |               |                  |                |                   |          |

| UMTS1900 Phablet SAR 10g                                                                            |      |      |                    |                  |                  |               |                                           |            |               |                  |                |                   |          |
|-----------------------------------------------------------------------------------------------------|------|------|--------------------|------------------|------------------|---------------|-------------------------------------------|------------|---------------|------------------|----------------|-------------------|----------|
| Frequency                                                                                           |      | Mode | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor                                    | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch.  |      |                    |                  |                  |               |                                           |            |               |                  |                |                   |          |
| 1 880.0                                                                                             | 9400 | RMC  | 23.5               | 22.87            | 0.03             | Rear          | OFF                                       | 1:1        | 8             | 0.665            | 1.156          | 0.769             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 23.5               | 22.87            | -0.04            | Front         | OFF                                       | 1:1        | 6             | 0.783            | 1.156          | 0.905             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 23.5               | 22.87            | 0.16             | Bottom        | OFF                                       | 1:1        | 12            | 0.816            | 1.156          | 0.943             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 23.5               | 22.87            | 0.06             | Left          | N/A                                       | 1:1        | 0             | 0.156            | 1.156          | 0.180             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 23.5               | 22.87            | 0.18             | Right         | N/A                                       | 1:1        | 0             | 0.210            | 1.156          | 0.243             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 20.0               | 19.28            | 0.14             | Rear          | ON                                        | 1:1        | 0             | 0.905            | 1.180          | 1.068             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 20.0               | 19.28            | 0.01             | Front         | ON                                        | 1:1        | 0             | 0.750            | 1.180          | 0.885             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 20.0               | 19.28            | 0.11             | Bottom        | ON                                        | 1:1        | 0             | 1.490            | 1.180          | <b>1.759</b>      | 60       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |                    |                  |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |            |               |                  |                |                   |          |

| LTE Band 2 Phablet SAR 10g                                                                          |       |      |            |                    |                  |                  |               |                                           |          |         |           |            |               |                  |                |                   |          |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|--------------------|------------------|------------------|---------------|-------------------------------------------|----------|---------|-----------|------------|---------------|------------------|----------------|-------------------|----------|
| Frequency                                                                                           |       | Mode | Band Width | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor                                    | MPR (dB) | RB Size | RB Offset | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch.   |      |            |                    |                  |                  |               |                                           |          |         |           |            |               |                  |                |                   |          |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.0               | 22.58            | -0.02            | Rear          | 8                                         | 0        | 1       | 0         | 1:1        | 8             | 0.496            | 1.102          | 0.547             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 22.0               | 21.57            | 0.01             | Rear          | 8                                         | 1        | 50      | 0         | 1:1        | 8             | 0.484            | 1.104          | 0.534             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.0               | 22.58            | -0.02            | Front         | 6                                         | 0        | 1       | 0         | 1:1        | 6             | 0.659            | 1.102          | 0.726             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 22.0               | 21.57            | -0.10            | Front         | 6                                         | 1        | 50      | 0         | 1:1        | 6             | 0.511            | 1.104          | 0.564             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.0               | 22.58            | 0.12             | Bottom        | 12                                        | 0        | 1       | 0         | 1:1        | 12            | 0.336            | 1.102          | 0.370             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 22.0               | 21.57            | 0.05             | Bottom        | 12                                        | 1        | 50      | 0         | 1:1        | 12            | 0.326            | 1.104          | 0.360             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.0               | 22.58            | -0.17            | Left          | N/A                                       | 0        | 1       | 0         | 1:1        | 0             | 0.208            | 1.102          | 0.229             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 22.0               | 21.57            | -0.17            | Left          | N/A                                       | 1        | 50      | 0         | 1:1        | 0             | 0.162            | 1.104          | 0.179             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.0               | 22.58            | 0.12             | Right         | N/A                                       | 0        | 1       | 0         | 1:1        | 0             | 0.302            | 1.102          | 0.333             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 22.0               | 21.57            | 0.11             | Right         | N/A                                       | 1        | 50      | 0         | 1:1        | 0             | 0.233            | 1.104          | 0.257             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 19.5               | 18.97            | 0.01             | Rear          | ON                                        | 0        | 1       | 0         | 1:1        | 0             | 0.977            | 1.130          | 1.104             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 19.5               | 18.88            | -0.14            | Rear          | ON                                        | 0        | 50      | 0         | 1:1        | 0             | 1.070            | 1.153          | 1.234             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 19.5               | 18.97            | 0.01             | Front         | ON                                        | 0        | 1       | 0         | 1:1        | 0             | 1.020            | 1.130          | 1.153             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 19.5               | 18.88            | 0.01             | Front         | ON                                        | 0        | 50      | 0         | 1:1        | 0             | 1.010            | 1.153          | 1.165             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 19.5               | 18.97            | 0.14             | Bottom        | ON                                        | 0        | 1       | 0         | 1:1        | 0             | 1.520            | 1.130          | 1.718             | -        |
| 1 860                                                                                               | 18700 | QPSK | 20         | 19.5               | 18.86            | 0.16             | Bottom        | ON                                        | 0        | 50      | 0         | 1:1        | 0             | 1.470            | 1.159          | 1.704             | -        |
| 1 880                                                                                               | 18900 | QPSK | 20         | 19.5               | 18.47            | 0.19             | Bottom        | ON                                        | 0        | 50      | 0         | 1:1        | 0             | 1.410            | 1.268          | 1.788             | -        |
| 1 900                                                                                               | 19100 | QPSK | 20         | 19.5               | 18.88            | 0.10             | Bottom        | ON                                        | 0        | 50      | 0         | 1:1        | 0             | 1.780            | 1.153          | <b>2.052</b>      | 61       |
| 1 900                                                                                               | 19100 | QPSK | 20         | 19.5               | 18.92            | 0.14             | Bottom        | ON                                        | 0        | 100     | 0         | 1:1        | 0             | 1.470            | 1.143          | 1.680             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |                    |                  |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |          |         |           |            |               |                  |                |                   |          |

| LTE Band 25 Phablet SAR 10g                                                                         |       |      |            |                    |                  |                  |               |                                           |          |         |           |            |               |                  |                |                   |          |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|--------------------|------------------|------------------|---------------|-------------------------------------------|----------|---------|-----------|------------|---------------|------------------|----------------|-------------------|----------|
| Frequency                                                                                           |       | Mode | Band Width | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor                                    | MPR (dB) | RB Size | RB Offset | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch.   |      |            |                    |                  |                  |               |                                           |          |         |           |            |               |                  |                |                   |          |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0               | 22.70            | 0.03             | Rear          | OFF                                       | 0        | 1       | 0         | 1:1        | 8             | 0.743            | 1.072          | 0.796             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0               | 21.66            | 0.01             | Rear          | OFF                                       | 1        | 50      | 0         | 1:1        | 8             | 0.594            | 1.081          | 0.642             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0               | 22.70            | 0.11             | Front         | OFF                                       | 0        | 1       | 0         | 1:1        | 6             | 0.823            | 1.072          | 0.882             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0               | 21.66            | 0.09             | Front         | OFF                                       | 1        | 50      | 0         | 1:1        | 6             | 0.658            | 1.081          | 0.712             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0               | 22.70            | 0.02             | Bottom        | OFF                                       | 0        | 1       | 0         | 1:1        | 12            | 0.806            | 1.072          | 0.864             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0               | 21.66            | 0.09             | Bottom        | OFF                                       | 1        | 50      | 0         | 1:1        | 12            | 0.639            | 1.081          | 0.691             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0               | 22.70            | 0.14             | Left          | N/A                                       | 0        | 1       | 0         | 1:1        | 0             | 0.166            | 1.072          | 0.178             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0               | 21.66            | 0.14             | Left          | N/A                                       | 1        | 50      | 0         | 1:1        | 0             | 0.132            | 1.081          | 0.143             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 23.0               | 22.70            | 0.10             | Right         | N/A                                       | 0        | 1       | 0         | 1:1        | 0             | 0.273            | 1.072          | 0.293             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 22.0               | 21.66            | 0.11             | Right         | N/A                                       | 1        | 50      | 0         | 1:1        | 0             | 0.215            | 1.081          | 0.233             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5               | 19.14            | 0.11             | Rear          | ON                                        | 0        | 1       | 49        | 1:1        | 0             | 0.992            | 1.086          | 1.078             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5               | 19.16            | 0.17             | Rear          | ON                                        | 0        | 50      | 0         | 1:1        | 0             | 1.030            | 1.081          | 1.114             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5               | 19.14            | 0.01             | Front         | ON                                        | 0        | 1       | 49        | 1:1        | 0             | 0.930            | 1.086          | 1.010             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5               | 19.16            | 0.01             | Front         | ON                                        | 0        | 50      | 0         | 1:1        | 0             | 0.974            | 1.081          | 1.053             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5               | 19.14            | 0.11             | Bottom        | ON                                        | 0        | 1       | 49        | 1:1        | 0             | 1.220            | 1.086          | 1.325             | -        |
| 1 905                                                                                               | 26590 | QPSK | 20         | 19.5               | 19.16            | 0.16             | Bottom        | ON                                        | 0        | 50      | 0         | 1:1        | 0             | 1.300            | 1.081          | <b>1.406</b>      | 62       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |                    |                  |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |          |         |           |            |               |                  |                |                   |          |

| LTE Band 66 Phablet SAR 10g                                                                         |        |      |            |                    |                  |                  |               |                                           |          |         |           |            |               |                  |                |                   |          |
|-----------------------------------------------------------------------------------------------------|--------|------|------------|--------------------|------------------|------------------|---------------|-------------------------------------------|----------|---------|-----------|------------|---------------|------------------|----------------|-------------------|----------|
| Frequency                                                                                           |        | Mode | Band Width | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor                                    | MPR (dB) | RB Size | RB Offset | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch.    |      |            |                    |                  |                  |               |                                           |          |         |           |            |               |                  |                |                   |          |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7               | 23.17            | 0.03             | Rear          | OFF                                       | 0        | 1       | 99        | 1:1        | 8             | 0.820            | 1.130          | 0.927             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7               | 22.15            | 0.06             | Rear          | OFF                                       | 1        | 50      | 0         | 1:1        | 8             | 0.674            | 1.135          | 0.765             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7               | 23.17            | 0.09             | Front         | OFF                                       | 0        | 1       | 99        | 1:1        | 6             | 0.888            | 1.130          | 1.003             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7               | 22.15            | 0.06             | Front         | OFF                                       | 1        | 50      | 0         | 1:1        | 6             | 0.722            | 1.135          | 0.819             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7               | 23.17            | 0.11             | Bottom        | OFF                                       | 0        | 1       | 99        | 1:1        | 12            | 0.609            | 1.130          | 0.688             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7               | 22.15            | 0.11             | Bottom        | OFF                                       | 1        | 50      | 0         | 1:1        | 12            | 0.504            | 1.135          | 0.572             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7               | 23.17            | 0.19             | Left          | N/A                                       | 0        | 1       | 99        | 1:1        | 0             | 0.162            | 1.130          | 0.183             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7               | 22.15            | 0.17             | Left          | N/A                                       | 1        | 50      | 0         | 1:1        | 0             | 0.131            | 1.135          | 0.149             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 23.7               | 23.17            | 0.19             | Right         | N/A                                       | 0        | 1       | 99        | 1:1        | 0             | 0.268            | 1.130          | 0.303             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 22.7               | 22.15            | 0.18             | Right         | N/A                                       | 1        | 50      | 0         | 1:1        | 0             | 0.216            | 1.135          | 0.246             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5               | 20.02            | 0.04             | Rear          | ON                                        | 0        | 1       | 99        | 1:1        | 0             | 1.220            | 1.117          | 1.363             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5               | 20.01            | -0.01            | Rear          | ON                                        | 0        | 50      | 49        | 1:1        | 0             | 1.260            | 1.119          | 1.410             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5               | 20.02            | -0.01            | Front         | ON                                        | 0        | 1       | 99        | 1:1        | 0             | 1.240            | 1.117          | 1.385             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5               | 20.01            | 0.19             | Front         | ON                                        | 0        | 50      | 49        | 1:1        | 0             | 1.260            | 1.119          | 1.410             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5               | 20.02            | 0.11             | Bottom        | ON                                        | 1        | 99      | 1:1       | 1:1        | 0             | 1.740            | 1.117          | 1.944             | -        |
| 1 745                                                                                               | 132322 | QPSK | 20         | 20.5               | 19.44            | -0.06            | Bottom        | ON                                        | 1        | 49      | 1:1       | 1:1        | 0             | 1.770            | 1.276          | 2.259             | -        |
| 1 770                                                                                               | 132572 | QPSK | 20         | 20.5               | 19.71            | 0.02             | Bottom        | ON                                        | 1        | 99      | 1:1       | 1:1        | 0             | 1.810            | 1.199          | 2.170             | -        |
| 1 720                                                                                               | 132072 | QPSK | 20         | 20.5               | 20.01            | 0.17             | Bottom        | ON                                        | 50       | 49      | 1:1       | 1:1        | 0             | 1.790            | 1.119          | 2.003             | -        |
| 1 745                                                                                               | 132322 | QPSK | 20         | 20.5               | 19.50            | -0.01            | Bottom        | ON                                        | 50       | 49      | 1:1       | 1:1        | 0             | 1.820            | 1.259          | 2.291             | -        |
| 1 770                                                                                               | 132572 | QPSK | 20         | 20.5               | 19.67            | -0.04            | Bottom        | ON                                        | 50       | 49      | 1:1       | 1:1        | 0             | 1.860            | 1.211          | 2.252             | -        |
| 1 770                                                                                               | 132572 | QPSK | 20         | 20.5               | 19.66            | 0.05             | Bottom        | ON                                        | 100      | 0       | 1:1       | 1:1        | 0             | 1.890            | 1.213          | <b>2.293</b>      | 63       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |      |            |                    |                  |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |          |         |           |            |               |                  |                |                   |          |

| 5 GHz WLAN Phablet SAR 10g                                                                          |     |         |                 |                  |                     |                   |                  |               |              |            |               |                                           |                  |                |                       |                   |          |
|-----------------------------------------------------------------------------------------------------|-----|---------|-----------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------|---------------|-------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| Frequency                                                                                           |     | Mode    | Bandwidth (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                 | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch. |         |                 |                  |                     |                   |                  |               |              |            |               |                                           |                  |                |                       |                   |          |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 18.0                | 17.11             | 0.01             | Rear          | Ant1         | 86.0       | 0             | 2.56                                      | 0.273            | 1.227          | 1.076                 | 0.361             |          |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 18.0                | 17.11             | 0.01             | Front         | Ant1         | 86.0       | 0             | 3.44                                      | 0.268            | 1.227          | 1.076                 | 0.382             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 18.0                | 17.11             | 0.19             | Left          | Ant1         | 86.0       | 0             | 7.75                                      | 0.535            | 1.227          | 1.076                 | 0.763             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 18.0                | 17.11             | -0.14            | Top           | Ant1         | 86.0       | 0             | 1.95                                      | 0.136            | 1.227          | 1.076                 | 0.180             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 18.0                | 17.38             | -0.10            | Rear          | Ant1         | 86.0       | 0             | 6.1                                       | 0.541            | 1.153          | 1.076                 | 0.725             |          |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 18.0                | 17.38             | 0.08             | Front         | Ant1         | 86.0       | 0             | 3.58                                      | 0.302            | 1.153          | 1.076                 | 0.375             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 18.0                | 17.38             | 0.16             | Left          | Ant1         | 86.0       | 0             | 5.08                                      | 0.529            | 1.153          | 1.076                 | 0.709             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 18.0                | 17.38             | 0.15             | Top           | Ant1         | 86.0       | 0             | 1.81                                      | 0.220            | 1.153          | 1.076                 | 0.273             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 18.0                | 17.47             | -0.10            | Rear          | Ant2         | 86.0       | 0             | 21.4                                      | 1.280            | 1.130          | 1.076                 | <b>1.556</b>      | 64       |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 18.0                | 17.47             | 0.01             | Front         | Ant2         | 86.0       | 0             | 0.375                                     | 0.046            | 1.130          | 1.076                 | 0.056             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 18.0                | 17.47             | -0.18            | Left          | Ant2         | 86.0       | 0             | 2.47                                      | 0.245            | 1.130          | 1.076                 | 0.298             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 18.0                | 17.47             | 0.12             | Top           | Ant2         | 86.0       | 0             | 0.767                                     | 0.113            | 1.130          | 1.076                 | 0.149             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 18.0                | 17.35             | 0.15             | Rear          | Ant2         | 86.0       | 0             | 7.74                                      | 0.873            | 1.161          | 1.076                 | 1.091             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 18.0                | 17.35             | 0.01             | Front         | Ant2         | 86.0       | 0             | 0.372                                     | 0.030            | 1.161          | 1.076                 | 0.037             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 18.0                | 17.35             | 0.11             | Left          | Ant2         | 86.0       | 0             | 1.84                                      | 0.155            | 1.161          | 1.076                 | 0.194             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 18.0                | 17.35             | 0.10             | Top           | Ant2         | 86.0       | 0             | 0.391                                     | 0.039            | 1.161          | 1.076                 | 0.049             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 21.0                | 20.30             | 0.16             | Rear          | MIMO         | 86.0       | 0             | 14.2                                      | 1.170            | 1.227          | 1.076                 | 1.545             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 21.0                | 20.30             | 0.01             | Front         | MIMO         | 86.0       | 0             | 1.61                                      | 0.211            | 1.227          | 1.076                 | 0.279             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 21.0                | 20.30             | -0.02            | Left          | MIMO         | 86.0       | 0             | 7.23                                      | 0.629            | 1.227          | 1.076                 | 0.831             | -        |
| 5 260                                                                                               | 52  | 802.11a | 20              | 6                | 21.0                | 20.30             | 0.12             | Top           | MIMO         | 86.0       | 0             | 1.5                                       | 0.256            | 1.227          | 1.076                 | 0.338             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 21.0                | 20.37             | -0.17            | Rear          | MIMO         | 86.0       | 0             | 13.8                                      | 1.100            | 1.161          | 1.076                 | 1.375             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 21.0                | 20.37             | 0.01             | Front         | MIMO         | 86.0       | 0             | 3.98                                      | 0.355            | 1.161          | 1.076                 | 0.444             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 21.0                | 20.37             | 0.19             | Left          | MIMO         | 86.0       | 0             | 9.14                                      | 0.607            | 1.161          | 1.076                 | 0.759             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20              | 6                | 21.0                | 20.37             | 0.15             | Top           | MIMO         | 86.0       | 0             | 2.14                                      | 0.275            | 1.161          | 1.076                 | 0.344             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                 |                  |                     |                   |                  |               |              |            |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |                  |                |                       |                   |          |

| 5 GHz WLAN Phablet SAR 10g - RSDB                                                                   |     |          |                 |                  |                     |                   |                  |               |              |            |               |                                           |                  |                |                       |                   |          |
|-----------------------------------------------------------------------------------------------------|-----|----------|-----------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------|---------------|-------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| Frequency                                                                                           |     | Mode     | Bandwidth (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                 | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                 | Ch. |          |                 |                  |                     |                   |                  |               |              |            |               |                                           |                  |                |                       |                   |          |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 14.0                | 13.00             | 0.01             | Rear          | Ant1         | 90.3       | 0             | 1.39                                      | 0.105            | 1.259          | 1.107                 | 0.146             |          |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 14.0                | 13.00             | 0.01             | Front         | Ant1         | 90.3       | 0             | 1.07                                      | 0.073            | 1.259          | 1.107                 | 0.102             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 14.0                | 13.00             | 0.01             | Left          | Ant1         | 90.3       | 0             | 2.13                                      | 0.129            | 1.259          | 1.107                 | 0.180             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 14.0                | 13.00             | 0.17             | Top           | Ant1         | 90.3       | 0             | 0.563                                     | 0.053            | 1.259          | 1.107                 | 0.074             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 14.0                | 13.38             | 0.01             | Rear          | Ant1         | 91.0       | 0             | 1.15                                      | 0.098            | 1.153          | 1.099                 | 0.124             |          |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 14.0                | 13.38             | 0.01             | Front         | Ant1         | 91.0       | 0             | 1.68                                      | 0.085            | 1.153          | 1.099                 | 0.108             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 14.0                | 13.38             | 0.01             | Left          | Ant1         | 91.0       | 0             | 2.61                                      | 0.191            | 1.153          | 1.099                 | 0.242             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 14.0                | 13.38             | 0.01             | Top           | Ant1         | 91.0       | 0             | 0.861                                     | 0.047            | 1.153          | 1.099                 | 0.060             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 14.0                | 12.11             | 0.01             | Rear          | Ant2         | 90.3       | 0             | 7.41                                      | 0.570            | 1.545          | 1.107                 | <b>0.975</b>      | 65       |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 14.0                | 12.11             | 0.01             | Front         | Ant2         | 90.3       | 0             | 0.0926                                    | 0.0094           | 1.545          | 1.107                 | 0.016             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 14.0                | 12.11             | 0.01             | Left          | Ant2         | 90.3       | 0             | 0.854                                     | 0.086            | 1.545          | 1.107                 | 0.147             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 14.0                | 12.11             | 0.10             | Top           | Ant2         | 90.3       | 0             | 0.376                                     | 0.044            | 1.545          | 1.107                 | 0.075             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 14.0                | 12.53             | 0.01             | Rear          | Ant2         | 91.0       | 0             | 3.06                                      | 0.412            | 1.403          | 1.099                 | 0.635             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 14.0                | 12.53             | 0.01             | Front         | Ant2         | 91.0       | 0             | 0.185                                     | 0.000267         | 1.403          | 1.099                 | 0.000             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 14.0                | 12.53             | 0.01             | Left          | Ant2         | 91.0       | 0             | 0.817                                     | 0.043            | 1.403          | 1.099                 | 0.066             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 14.0                | 12.53             | 0.07             | Top           | Ant2         | 91.0       | 0             | 0.151                                     | 0.014            | 1.403          | 1.099                 | 0.022             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 17.0                | 15.59             | 0.01             | Rear          | MIMO         | 90.3       | 0             | 3.52                                      | 0.467            | 1.545          | 1.107                 | 0.799             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 17.0                | 15.59             | 0.01             | Front         | MIMO         | 90.3       | 0             | 1.35                                      | 0.076            | 1.545          | 1.107                 | 0.130             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 17.0                | 15.59             | -0.16            | Left          | MIMO         | 90.3       | 0             | 0.788                                     | 0.237            | 1.545          | 1.107                 | 0.405             | -        |
| 5 270                                                                                               | 54  | 802.11n  | 40              | MCS0             | 17.0                | 15.59             | 0.13             | Top           | MIMO         | 90.3       | 0             | 0.953                                     | 0.066            | 1.545          | 1.107                 | 0.113             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 17.0                | 15.99             | 0.01             | Rear          | MIMO         | 91.0       | 0             | 8.81                                      | 0.461            | 1.403          | 1.099                 | 0.711             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 17.0                | 15.99             | 0.01             | Front         | MIMO         | 91.0       | 0             | 0.986                                     | 0.062            | 1.403          | 1.099                 | 0.096             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 17.0                | 15.99             | 0.01             | Left          | MIMO         | 91.0       | 0             | 2.74                                      | 0.218            | 1.403          | 1.099                 | 0.336             | -        |
| 5 690                                                                                               | 138 | 802.11ac | 80              | MCS0             | 17.0                | 15.99             | 0.12             | Top           | MIMO         | 91.0       | 0             | 0.692                                     | 0.056            | 1.403          | 1.099                 | 0.086             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |                 |                  |                     |                   |                  |               |              |            |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |                  |                |                       |                   |          |

## 13.6 SAR Test Notes

### General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Procedure.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB 648474 D04v01r03, SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was  $\leq 1.2$  W/kg, no additional SAR evaluation using a headset cable were required.
8. Per KDB 648474 D04v01r03, this device is considered a "Phablet" since the diagonal dimension is  $> 160$  mm and  $< 200$  mm. When hotspot mode applies, extremity SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (with tolerance) is 1 g SAR  $> 1.2$  W/kg.
9. Per FCC KDB 865664 D01v01r04, variability SAR measurement were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg for 1g SAR and  $>2$  for 10g SAR Please see Section 15 for variability analysis.
10. This device utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
11. During SAR testing for the Hotspot conditions per KDB 941225 D06v02r01, the actual portable hotspot operation (with actual simultaneous transmission of a transmitter with WiFi) was not activated.

### GSM/GPRS Test Notes:

1. This EUT'S GSM and GPRS device class is B..
2. Justification for reduced test configurations per KDB 941225 D01v03r01: The source-based time-averaged output power was evaluated for all multi-slot operations. The multi-slot configuration with the highest frame averaged output power including tolerance was evaluated for SAR.
3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is  $\leq 0.8$  W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is 1/2 dB, instead of the middle channel, the highest output power channel must be used.
4. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.

### UMTSNotes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTSSAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB

Publication 941225 D01v03r01.

3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is  $\leq 0.8$  W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.

#### LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Consideration for LTE Devices in FCC KDB 941225 D05v02r05.
2. According to FCC KDB 941225 D05v02r05:  
When the reported SAR is  $\leq 0.8$  W/kg, testing of the 100% RB allocation and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the 1RB, 50%RB and 100%RB allocation with highest output power for that channel.  
Only one channel, and as reported SAR values for 1RB allocation and 50%RB allocation were less than 1.45W/Kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to target MPR is indicated alongside the SAR results.
4. When Power reduction is applied , MPR is 0
5. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator.
6. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) LTE TDD Band 41 SAR measured at the highest output power channel for each test configuration is  $\leq 0.6$  W/kg then testing at the other channels is not required for such test configurations.
7. TDD LTE (Power Class 3) was tested using UL-DL configuration 0 with 6 UL sub frames and 2S sub frames using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633(cf=1.58).
8. Per KDB 941225 D05Av01r02, SAR for LTE Carrier Aggregation operations was not needed because the maximum average output power in LTE CA mode was not  $> 0.25$  dB higher than the maximum output power when downlink CA was not activated.
9. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The Highest available duty cycle for Power Class 2 operations is 43.3% using UL-DL configuration 1. Per May TCB Workshop notes, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions.
10. SAR test reduction is applied using the following criteria:  
Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is  $> 0.8$  W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are  $> 0.8$  W/kg, testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation  $< 1.45$  W/kg. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is  $< 1.45$  W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is  $< 1.45$  W/kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

**WLAN Notes:**

1. For held-to-ear and hotspot operations, the initial test position procedures were applied. For initial test position, the highest extrapolated peak SAR will be used. When reported SAR for the initial test position is  $\leq 0.4$  W/kg for 1g SAR and  $\leq 1.0$  W/kg for 10g SAR, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR results is  $\leq 0.8$  W/kg for 1g SAR and  $\leq 2.0$  W/kg for 10g SAR or all test position are measured.
2. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHz WiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11 g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR.
3. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHz WiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission mode were not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1g SAR and less than 3.0 W/kg for 10 g SAR.
4. When the maximum reported 1g averaged SAR is  $\leq 0.8$  W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was  $\leq 1.20$  W/kg or all test channels were measured.
5. The device was configured to transmit continuously at the required data rated, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.
6. Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is  $< 1.6$  W/kg, no additional SAR Measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

**Bluetooth Notes:**

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests mode type. Per October 2016 TCBC Workshop Notes, the reported SAR was scaled to 100% transmission duty factor to determine compliance. Please see sec.11 for the time-domain plot and calculation for duty factor of the device.
2. Head and Bluetooth tethering SAR were evaluated for BT BR tethering applications.

## 14. Simultaneous SAR Analysis

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per KDB Publication 447498 D01v06 4.3.2, simultaneous transmission SAR test exclusion may be applied when the sum of 1g SAR and 10g SAR for all the simultaneous transmitting antennas in a specific physical test configuration is  $\leq 1.6\text{W/kg}$  for 1g SAR and  $\leq 4\text{ W/kg}$  for 10g SAR. The different test positions in an exposure condition may be considered collectively to determine SAR exclusion according to the sum of 1g or 10g SAR.

## 14.1 Head SAR Simultaneous Transmission Analysis.

| Band           | Configurati<br>on | Main  | 5GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 5 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | 2.4GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 2.4 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | BT    | Σ 1-g<br>SAR | Σ 1-g<br>SAR | Σ 1-g<br>SAR | Σ 1-g<br>SAR | Σ 1-g<br>SAR | Σ 1-g<br>SAR | SPLSR  |
|----------------|-------------------|-------|---------------------------------------|----------------------------------------|-----------------------------------------|------------------------------------------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------|
|                |                   | 1     | 2                                     | 3                                      | 4                                       | 5                                        | 6     | 1+2          | 1+3          | 1+4          | 1+5          | 1+6          | 1+4+5        | Yes/No |
| GSM850         | Left Touch        | 0.175 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.254        | 0.249        | 0.452        | 0.175        | 0.788        | 0.452        | NO     |
|                | Left Tilt         | 0.130 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.192        | 0.228        | 0.477        | 0.132        | 1.03         | 0.479        | NO     |
|                | Right Touch       | 0.118 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.406        | 0.191        | 0.578        | 0.118        | 0.929        | 0.578        | NO     |
|                | Right Tilt        | 0.111 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.341        | 0.203        | 0.700        | 0.124        | 1.056        | 0.713        | NO     |
| GSM1900        | Left Touch        | 0.068 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.147        | 0.142        | 0.345        | 0.068        | 0.681        | 0.345        | NO     |
|                | Left Tilt         | 0.063 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.125        | 0.161        | 0.410        | 0.065        | 0.963        | 0.412        | NO     |
|                | Right Touch       | 0.097 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.385        | 0.170        | 0.557        | 0.097        | 0.908        | 0.557        | NO     |
|                | Right Tilt        | 0.063 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.293        | 0.155        | 0.652        | 0.076        | 1.008        | 0.665        | NO     |
| UMTS<br>Band 2 | Left Touch        | 0.054 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.133        | 0.128        | 0.331        | 0.054        | 0.667        | 0.331        | NO     |
|                | Left Tilt         | 0.051 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.113        | 0.149        | 0.398        | 0.053        | 0.951        | 0.400        | NO     |
|                | Right Touch       | 0.075 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.363        | 0.148        | 0.535        | 0.075        | 0.886        | 0.535        | NO     |
|                | Right Tilt        | 0.072 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.302        | 0.164        | 0.661        | 0.085        | 1.017        | 0.674        | NO     |
| UMTS<br>Band 4 | Left Touch        | 0.078 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.157        | 0.152        | 0.355        | 0.078        | 0.691        | 0.355        | NO     |
|                | Left Tilt         | 0.056 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.118        | 0.154        | 0.403        | 0.058        | 0.956        | 0.405        | NO     |
|                | Right Touch       | 0.132 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.420        | 0.205        | 0.592        | 0.132        | 0.943        | 0.592        | NO     |
|                | Right Tilt        | 0.082 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.312        | 0.174        | 0.671        | 0.095        | 1.027        | 0.684        | NO     |
| UMTS<br>Band 5 | Left Touch        | 0.144 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.223        | 0.218        | 0.421        | 0.144        | 0.757        | 0.421        | NO     |
|                | Left Tilt         | 0.077 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.139        | 0.175        | 0.424        | 0.079        | 0.977        | 0.426        | NO     |
|                | Right Touch       | 0.107 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.395        | 0.180        | 0.567        | 0.107        | 0.918        | 0.567        | NO     |
|                | Right Tilt        | 0.100 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.330        | 0.192        | 0.689        | 0.113        | 1.045        | 0.702        | NO     |
| LTE 2          | Left Touch        | 0.094 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.173        | 0.168        | 0.371        | 0.094        | 0.707        | 0.371        | NO     |
|                | Left Tilt         | 0.074 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.136        | 0.172        | 0.421        | 0.076        | 0.974        | 0.423        | NO     |
|                | Right Touch       | 0.098 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.386        | 0.171        | 0.558        | 0.098        | 0.909        | 0.558        | NO     |
|                | Right Tilt        | 0.068 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.298        | 0.160        | 0.657        | 0.081        | 1.013        | 0.670        | NO     |
| LTE 5          | Left Touch        | 0.148 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.227        | 0.222        | 0.425        | 0.148        | 0.761        | 0.425        | NO     |
|                | Left Tilt         | 0.063 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.125        | 0.161        | 0.410        | 0.065        | 0.963        | 0.412        | NO     |
|                | Right Touch       | 0.096 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.384        | 0.169        | 0.556        | 0.096        | 0.907        | 0.556        | NO     |
|                | Right Tilt        | 0.078 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.308        | 0.170        | 0.667        | 0.091        | 1.023        | 0.680        | NO     |
| LTE 12         | Left Touch        | 0.064 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.143        | 0.138        | 0.341        | 0.064        | 0.677        | 0.341        | NO     |
|                | Left Tilt         | 0.029 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.091        | 0.127        | 0.376        | 0.031        | 0.929        | 0.378        | NO     |
|                | Right Touch       | 0.051 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.339        | 0.124        | 0.511        | 0.051        | 0.862        | 0.511        | NO     |
|                | Right Tilt        | 0.032 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.262        | 0.124        | 0.621        | 0.045        | 0.977        | 0.634        | NO     |
| LTE13          | Left Touch        | 0.106 | 0.079                                 | 0.074                                  | 0.277                                   | 0.000                                    | 0.613 | 0.185        | 0.180        | 0.383        | 0.106        | 0.719        | 0.383        | NO     |
|                | Left Tilt         | 0.047 | 0.062                                 | 0.098                                  | 0.347                                   | 0.002                                    | 0.900 | 0.109        | 0.145        | 0.394        | 0.049        | 0.947        | 0.396        | NO     |
|                | Right Touch       | 0.066 | 0.288                                 | 0.073                                  | 0.460                                   | 0.000                                    | 0.811 | 0.354        | 0.139        | 0.526        | 0.066        | 0.877        | 0.526        | NO     |
|                | Right Tilt        | 0.032 | 0.230                                 | 0.092                                  | 0.589                                   | 0.013                                    | 0.945 | 0.262        | 0.124        | 0.621        | 0.045        | 0.977        | 0.634        | NO     |

| Band        | Configuration | Main  | 5GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 5 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | 2.4GHz<br>z SISO<br>Ant1<br>SAR<br>(W/kg) | 2.4 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | BT    | $\sum$ 1-g<br>SAR | $\sum$ 1-g<br>SAR | $\sum$ 1-g<br>SAR | $\sum$ 1-g<br>SAR | $\sum$ 1-g<br>SAR | $\sum$ 1-g<br>SAR | SPLSR  |
|-------------|---------------|-------|---------------------------------------|----------------------------------------|-------------------------------------------|------------------------------------------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------|
|             |               | 1     | 2                                     | 3                                      | 4                                         | 5                                        | 6     | 1+2               | 1+3               | 1+4               | 1+5               | 1+6               | 1+4+5             | Yes/No |
| LTE 25      | Left Touch    | 0.080 | 0.079                                 | 0.074                                  | 0.277                                     | 0.000                                    | 0.613 | 0.159             | 0.154             | 0.357             | 0.080             | 0.693             | 0.357             | NO     |
|             | Left Tilt     | 0.077 | 0.062                                 | 0.098                                  | 0.347                                     | 0.002                                    | 0.900 | 0.139             | 0.175             | 0.424             | 0.079             | 0.977             | 0.426             | NO     |
|             | Right Touch   | 0.105 | 0.288                                 | 0.073                                  | 0.460                                     | 0.000                                    | 0.811 | 0.393             | 0.178             | 0.565             | 0.105             | 0.916             | 0.565             | NO     |
|             | Right Tilt    | 0.060 | 0.230                                 | 0.092                                  | 0.589                                     | 0.013                                    | 0.945 | 0.290             | 0.152             | 0.649             | 0.073             | 1.005             | 0.662             | NO     |
| LTE 26      | Left Touch    | 0.122 | 0.079                                 | 0.074                                  | 0.277                                     | 0.000                                    | 0.613 | 0.201             | 0.196             | 0.399             | 0.122             | 0.735             | 0.399             | NO     |
|             | Left Tilt     | 0.067 | 0.062                                 | 0.098                                  | 0.347                                     | 0.002                                    | 0.900 | 0.129             | 0.165             | 0.414             | 0.069             | 0.967             | 0.416             | NO     |
|             | Right Touch   | 0.073 | 0.288                                 | 0.073                                  | 0.460                                     | 0.000                                    | 0.811 | 0.361             | 0.146             | 0.533             | 0.073             | 0.884             | 0.533             | NO     |
|             | Right Tilt    | 0.064 | 0.230                                 | 0.092                                  | 0.589                                     | 0.013                                    | 0.945 | 0.294             | 0.156             | 0.653             | 0.077             | 1.009             | 0.666             | NO     |
| LTE 41(PC3) | Left Touch    | 0.015 | 0.079                                 | 0.074                                  | 0.277                                     | 0.000                                    | 0.613 | 0.094             | 0.089             | 0.292             | 0.015             | 0.628             | 0.292             | NO     |
|             | Left Tilt     | 0.062 | 0.062                                 | 0.098                                  | 0.347                                     | 0.002                                    | 0.900 | 0.124             | 0.160             | 0.409             | 0.064             | 0.962             | 0.411             | NO     |
|             | Right Touch   | 0.042 | 0.288                                 | 0.073                                  | 0.460                                     | 0.000                                    | 0.811 | 0.330             | 0.115             | 0.502             | 0.042             | 0.853             | 0.502             | NO     |
|             | Right Tilt    | 0.037 | 0.230                                 | 0.092                                  | 0.589                                     | 0.013                                    | 0.945 | 0.267             | 0.129             | 0.626             | 0.050             | 0.982             | 0.639             | NO     |
| LTE 41(PC2) | Left Touch    |       | 0.079                                 | 0.074                                  | 0.277                                     | 0.000                                    | 0.613 | 0.079             | 0.074             | 0.277             | 0.000             | 0.613             | 0.277             | NO     |
|             | Left Tilt     | 0.055 | 0.062                                 | 0.098                                  | 0.347                                     | 0.002                                    | 0.900 | 0.117             | 0.153             | 0.402             | 0.057             | 0.955             | 0.404             | NO     |
|             | Right Touch   |       | 0.288                                 | 0.073                                  | 0.460                                     | 0.000                                    | 0.811 | 0.288             | 0.073             | 0.460             | 0.000             | 0.811             | 0.460             | NO     |
|             | Right Tilt    |       | 0.230                                 | 0.092                                  | 0.589                                     | 0.013                                    | 0.945 | 0.230             | 0.092             | 0.589             | 0.013             | 0.945             | 0.602             | NO     |
| LTE 66      | Left Touch    | 0.089 | 0.079                                 | 0.074                                  | 0.277                                     | 0.000                                    | 0.613 | 0.168             | 0.163             | 0.366             | 0.089             | 0.702             | 0.366             | NO     |
|             | Left Tilt     | 0.082 | 0.062                                 | 0.098                                  | 0.347                                     | 0.002                                    | 0.900 | 0.144             | 0.180             | 0.429             | 0.084             | 0.982             | 0.431             | NO     |
|             | Right Touch   | 0.125 | 0.288                                 | 0.073                                  | 0.460                                     | 0.000                                    | 0.811 | 0.413             | 0.198             | 0.585             | 0.125             | 0.936             | 0.585             | NO     |
|             | Right Tilt    | 0.082 | 0.230                                 | 0.092                                  | 0.589                                     | 0.013                                    | 0.945 | 0.312             | 0.174             | 0.671             | 0.095             | 1.027             | 0.684             | NO     |

| Simultaneous Transmission Summation Scenario with 5 GHz WLAN & BT |                   |       |                                   |           |                |                |                |        |
|-------------------------------------------------------------------|-------------------|-------|-----------------------------------|-----------|----------------|----------------|----------------|--------|
| Band                                                              | Configurat<br>ion | Main  | 5GHz<br>MIMO RCV<br>SAR<br>(W/kg) | Bluetooth | $\sum$ 1-g SAR | $\sum$ 1-g SAR | $\sum$ 1-g SAR | SPLSR  |
|                                                                   |                   | 1     | 2                                 | 3         | 1+2            | 1+3            | 1+2+3          | Yes/No |
| GSM850                                                            | Left Touch        | 0.175 | 0.079                             | 0.613     | 0.254          | 0.788          | 0.867          | NO     |
|                                                                   | Left Tilt         | 0.13  | 0.116                             | 0.900     | 0.246          | 1.03           | 1.146          | NO     |
|                                                                   | Right Touch       | 0.118 | 0.392                             | 0.811     | 0.51           | 0.929          | 1.321          | NO     |
|                                                                   | Right Tilt        | 0.111 | 0.313                             | 0.945     | 0.424          | 1.056          | 1.369          | NO     |
| GSM1900                                                           | Left Touch        | 0.068 | 0.079                             | 0.613     | 0.147          | 0.681          | 0.760          | NO     |
|                                                                   | Left Tilt         | 0.063 | 0.116                             | 0.900     | 0.179          | 0.963          | 1.079          | NO     |
|                                                                   | Right Touch       | 0.097 | 0.392                             | 0.811     | 0.489          | 0.908          | 1.300          | NO     |
|                                                                   | Right Tilt        | 0.063 | 0.313                             | 0.945     | 0.376          | 1.008          | 1.321          | NO     |
| UMTS Band 2                                                       | Left Touch        | 0.054 | 0.079                             | 0.613     | 0.133          | 0.667          | 0.746          | NO     |
|                                                                   | Left Tilt         | 0.051 | 0.116                             | 0.900     | 0.167          | 0.951          | 1.067          | NO     |
|                                                                   | Right Touch       | 0.075 | 0.392                             | 0.811     | 0.467          | 0.886          | 1.278          | NO     |
|                                                                   | Right Tilt        | 0.072 | 0.313                             | 0.945     | 0.385          | 1.017          | 1.330          | NO     |
| UMTS Band 4                                                       | Left Touch        | 0.078 | 0.079                             | 0.613     | 0.157          | 0.691          | 0.770          | NO     |
|                                                                   | Left Tilt         | 0.056 | 0.116                             | 0.900     | 0.172          | 0.956          | 1.072          | NO     |
|                                                                   | Right Touch       | 0.132 | 0.392                             | 0.811     | 0.524          | 0.943          | 1.335          | NO     |
|                                                                   | Right Tilt        | 0.082 | 0.313                             | 0.945     | 0.395          | 1.027          | 1.340          | NO     |
| UMTS Band 5                                                       | Left Touch        | 0.144 | 0.079                             | 0.613     | 0.223          | 0.757          | 0.836          | NO     |
|                                                                   | Left Tilt         | 0.077 | 0.116                             | 0.900     | 0.193          | 0.977          | 1.093          | NO     |
|                                                                   | Right Touch       | 0.107 | 0.392                             | 0.811     | 0.499          | 0.918          | 1.310          | NO     |
|                                                                   | Right Tilt        | 0.100 | 0.313                             | 0.945     | 0.413          | 1.045          | 1.358          | NO     |
| LTE 2                                                             | Left Touch        | 0.094 | 0.079                             | 0.613     | 0.173          | 0.707          | 0.786          | NO     |
|                                                                   | Left Tilt         | 0.074 | 0.116                             | 0.900     | 0.19           | 0.974          | 1.090          | NO     |
|                                                                   | Right Touch       | 0.098 | 0.392                             | 0.811     | 0.49           | 0.909          | 1.301          | NO     |
|                                                                   | Right Tilt        | 0.068 | 0.313                             | 0.945     | 0.381          | 1.013          | 1.326          | NO     |

| Simultaneous Transmission Summation Scenario with 5 GHz WLAN & BT |               |       |                                   |           |                |                |                |        |
|-------------------------------------------------------------------|---------------|-------|-----------------------------------|-----------|----------------|----------------|----------------|--------|
| Band                                                              | Configuration | Main  | 5GHz<br>MIMO RCV<br>SAR<br>(W/kg) | Bluetooth | $\sum$ 1-g SAR | $\sum$ 1-g SAR | $\sum$ 1-g SAR | SPLSR  |
|                                                                   |               | 1     | 2                                 | 3         | 1+2            | 1+3            | 1+2+3          | Yes/No |
| LTE 5                                                             | Left Touch    | 0.148 | 0.079                             | 0.613     | 0.227          | 0.761          | 0.84           | NO     |
|                                                                   | Left Tilt     | 0.063 | 0.116                             | 0.900     | 0.179          | 0.963          | 1.079          | NO     |
|                                                                   | Right Touch   | 0.096 | 0.392                             | 0.811     | 0.488          | 0.907          | 1.299          | NO     |
|                                                                   | Right Tilt    | 0.078 | 0.313                             | 0.945     | 0.391          | 1.023          | 1.336          | NO     |
| LTE 12                                                            | Left Touch    | 0.064 | 0.079                             | 0.613     | 0.143          | 0.677          | 0.756          | NO     |
|                                                                   | Left Tilt     | 0.029 | 0.116                             | 0.900     | 0.145          | 0.929          | 1.045          | NO     |
|                                                                   | Right Touch   | 0.051 | 0.392                             | 0.811     | 0.443          | 0.862          | 1.254          | NO     |
|                                                                   | Right Tilt    | 0.032 | 0.313                             | 0.945     | 0.345          | 0.977          | 1.290          | NO     |
| LTE13                                                             | Left Touch    | 0.106 | 0.079                             | 0.613     | 0.185          | 0.719          | 0.798          | NO     |
|                                                                   | Left Tilt     | 0.047 | 0.116                             | 0.900     | 0.163          | 0.947          | 1.063          | NO     |
|                                                                   | Right Touch   | 0.066 | 0.392                             | 0.811     | 0.458          | 0.877          | 1.269          | NO     |
|                                                                   | Right Tilt    | 0.032 | 0.313                             | 0.945     | 0.345          | 0.977          | 1.290          | NO     |
| LTE 25                                                            | Left Touch    | 0.08  | 0.079                             | 0.613     | 0.159          | 0.693          | 0.772          | NO     |
|                                                                   | Left Tilt     | 0.077 | 0.116                             | 0.900     | 0.193          | 0.977          | 1.093          | NO     |
|                                                                   | Right Touch   | 0.105 | 0.392                             | 0.811     | 0.497          | 0.916          | 1.308          | NO     |
|                                                                   | Right Tilt    | 0.06  | 0.313                             | 0.945     | 0.373          | 1.005          | 1.318          | NO     |
| LTE 26                                                            | Left Touch    | 0.122 | 0.079                             | 0.613     | 0.201          | 0.735          | 0.814          | NO     |
|                                                                   | Left Tilt     | 0.067 | 0.116                             | 0.900     | 0.183          | 0.967          | 1.083          | NO     |
|                                                                   | Right Touch   | 0.073 | 0.392                             | 0.811     | 0.465          | 0.884          | 1.276          | NO     |
|                                                                   | Right Tilt    | 0.064 | 0.313                             | 0.945     | 0.377          | 1.009          | 1.322          | NO     |
| LTE 41(PC3)                                                       | Left Touch    | 0.015 | 0.079                             | 0.613     | 0.094          | 0.628          | 0.707          | NO     |
|                                                                   | Left Tilt     | 0.062 | 0.116                             | 0.900     | 0.178          | 0.962          | 1.078          | NO     |
|                                                                   | Right Touch   | 0.042 | 0.392                             | 0.811     | 0.434          | 0.853          | 1.245          | NO     |
|                                                                   | Right Tilt    | 0.037 | 0.313                             | 0.945     | 0.35           | 0.982          | 1.295          | NO     |
| LTE 41(PC2)                                                       | Left Touch    |       | 0.079                             | 0.613     | 0.079          | 0.613          | 0.692          | NO     |
|                                                                   | Left Tilt     | 0.055 | 0.116                             | 0.900     | 0.171          | 0.955          | 1.071          | NO     |
|                                                                   | Right Touch   |       | 0.392                             | 0.811     | 0.392          | 0.811          | 1.203          | NO     |
|                                                                   | Right Tilt    |       | 0.313                             | 0.945     | 0.313          | 0.945          | 1.258          | NO     |
| LTE 66                                                            | Left Touch    | 0.089 | 0.079                             | 0.613     | 0.168          | 0.702          | 0.781          | NO     |
|                                                                   | Left Tilt     | 0.082 | 0.116                             | 0.900     | 0.198          | 0.982          | 1.098          | NO     |
|                                                                   | Right Touch   | 0.125 | 0.392                             | 0.811     | 0.517          | 0.936          | 1.328          | NO     |
|                                                                   | Right Tilt    | 0.082 | 0.313                             | 0.945     | 0.395          | 1.027          | 1.340          | NO     |

The output of RCV on in the 5GHz WLAN mode of this device is higher than that in the 5GHz WLAN RSDB with RCV on mode. The higher output RCV on Head SAR measurement results of the 5GHz WLAN mode were applied to the SAR simultaneous transmission analysis instead of the Head SAR results of the 5GHz WLAN mode RSDB with RCV on mode. It was confirmed that this product satisfies the FCC SAR limit through simultaneous transmission evaluation of RSDB with RCV on mode applying the head SAR measurement result with higher output power.

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN<br>(RSDB with RCV on) |               |       |                                      |                                    |                |        |
|--------------------------------------------------------------------------------------------------|---------------|-------|--------------------------------------|------------------------------------|----------------|--------|
| Band                                                                                             | Configuration | Main  | 2.4 GHz RCV<br>MIMO<br>SAR<br>(W/kg) | 5 GHz RCV<br>MIMO<br>SAR<br>(W/kg) | $\sum$ 1-g SAR | SPLSR  |
|                                                                                                  |               | 1     | 2                                    | 3                                  | 1+2+3          | Yes/No |
| GSM850                                                                                           | Left Touch    | 0.175 | 0.193                                | 0.079                              | 0.447          | NO     |
|                                                                                                  | Left Tilt     | 0.13  | 0.279                                | 0.116                              | 0.525          | NO     |
|                                                                                                  | Right Touch   | 0.118 | 0.285                                | 0.392                              | 0.795          | NO     |
|                                                                                                  | Right Tilt    | 0.111 | 0.367                                | 0.313                              | 0.791          | NO     |
| GSM1900                                                                                          | Left Touch    | 0.068 | 0.193                                | 0.079                              | 0.34           | NO     |
|                                                                                                  | Left Tilt     | 0.063 | 0.279                                | 0.116                              | 0.458          | NO     |
|                                                                                                  | Right Touch   | 0.097 | 0.285                                | 0.392                              | 0.774          | NO     |
|                                                                                                  | Right Tilt    | 0.063 | 0.367                                | 0.313                              | 0.743          | NO     |
| UMTS Band 2                                                                                      | Left Touch    | 0.054 | 0.193                                | 0.079                              | 0.326          | NO     |
|                                                                                                  | Left Tilt     | 0.051 | 0.279                                | 0.116                              | 0.446          | NO     |
|                                                                                                  | Right Touch   | 0.075 | 0.285                                | 0.392                              | 0.752          | NO     |
|                                                                                                  | Right Tilt    | 0.072 | 0.367                                | 0.313                              | 0.752          | NO     |
| UMTS Band 4                                                                                      | Left Touch    | 0.078 | 0.193                                | 0.079                              | 0.35           | NO     |
|                                                                                                  | Left Tilt     | 0.056 | 0.279                                | 0.116                              | 0.451          | NO     |
|                                                                                                  | Right Touch   | 0.132 | 0.285                                | 0.392                              | 0.809          | NO     |
|                                                                                                  | Right Tilt    | 0.082 | 0.367                                | 0.313                              | 0.762          | NO     |
| UMTS Band 5                                                                                      | Left Touch    | 0.144 | 0.193                                | 0.079                              | 0.416          | NO     |
|                                                                                                  | Left Tilt     | 0.077 | 0.279                                | 0.116                              | 0.472          | NO     |
|                                                                                                  | Right Touch   | 0.107 | 0.285                                | 0.392                              | 0.784          | NO     |
|                                                                                                  | Right Tilt    | 0.100 | 0.367                                | 0.313                              | 0.78           | NO     |
| LTE 2                                                                                            | Left Touch    | 0.094 | 0.193                                | 0.079                              | 0.366          | NO     |
|                                                                                                  | Left Tilt     | 0.074 | 0.279                                | 0.116                              | 0.469          | NO     |
|                                                                                                  | Right Touch   | 0.098 | 0.285                                | 0.392                              | 0.775          | NO     |
|                                                                                                  | Right Tilt    | 0.068 | 0.367                                | 0.313                              | 0.748          | NO     |
| LTE 5                                                                                            | Left Touch    | 0.148 | 0.193                                | 0.079                              | 0.42           | NO     |
|                                                                                                  | Left Tilt     | 0.063 | 0.279                                | 0.116                              | 0.458          | NO     |
|                                                                                                  | Right Touch   | 0.096 | 0.285                                | 0.392                              | 0.773          | NO     |
|                                                                                                  | Right Tilt    | 0.078 | 0.367                                | 0.313                              | 0.758          | NO     |

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN<br>(RSDB with RCV on) |               |       |                                      |                                    |                |        |
|--------------------------------------------------------------------------------------------------|---------------|-------|--------------------------------------|------------------------------------|----------------|--------|
| Band                                                                                             | Configuration | Main  | 2.4 GHz<br>RCV MIMO<br>SAR<br>(W/kg) | 5 GHz RCV<br>MIMO<br>SAR<br>(W/kg) | $\sum$ 1-g SAR | SPLSR  |
|                                                                                                  |               | 1     | 2                                    | 3                                  | 1+2+3          | Yes/No |
| LTE 12                                                                                           | Left Touch    | 0.064 | 0.193                                | 0.079                              | 0.336          | NO     |
|                                                                                                  | Left Tilt     | 0.029 | 0.279                                | 0.116                              | 0.424          | NO     |
|                                                                                                  | Right Touch   | 0.051 | 0.285                                | 0.392                              | 0.728          | NO     |
|                                                                                                  | Right Tilt    | 0.032 | 0.367                                | 0.313                              | 0.712          | NO     |
| LTE13                                                                                            | Left Touch    | 0.106 | 0.193                                | 0.079                              | 0.378          | NO     |
|                                                                                                  | Left Tilt     | 0.047 | 0.279                                | 0.116                              | 0.442          | NO     |
|                                                                                                  | Right Touch   | 0.066 | 0.285                                | 0.392                              | 0.743          | NO     |
|                                                                                                  | Right Tilt    | 0.032 | 0.367                                | 0.313                              | 0.712          | NO     |
| LTE 25                                                                                           | Left Touch    | 0.08  | 0.193                                | 0.079                              | 0.352          | NO     |
|                                                                                                  | Left Tilt     | 0.077 | 0.279                                | 0.116                              | 0.472          | NO     |
|                                                                                                  | Right Touch   | 0.105 | 0.285                                | 0.392                              | 0.782          | NO     |
|                                                                                                  | Right Tilt    | 0.06  | 0.367                                | 0.313                              | 0.74           | NO     |
| LTE 26                                                                                           | Left Touch    | 0.122 | 0.193                                | 0.079                              | 0.394          | NO     |
|                                                                                                  | Left Tilt     | 0.067 | 0.279                                | 0.116                              | 0.462          | NO     |
|                                                                                                  | Right Touch   | 0.073 | 0.285                                | 0.392                              | 0.75           | NO     |
|                                                                                                  | Right Tilt    | 0.064 | 0.367                                | 0.313                              | 0.744          | NO     |
| LTE 41(PC3)                                                                                      | Left Touch    | 0.015 | 0.193                                | 0.079                              | 0.287          | NO     |
|                                                                                                  | Left Tilt     | 0.062 | 0.279                                | 0.116                              | 0.457          | NO     |
|                                                                                                  | Right Touch   | 0.042 | 0.285                                | 0.392                              | 0.719          | NO     |
|                                                                                                  | Right Tilt    | 0.037 | 0.367                                | 0.313                              | 0.717          | NO     |
| LTE 41(PC2)                                                                                      | Left Touch    |       | 0.193                                | 0.079                              | 0.272          | NO     |
|                                                                                                  | Left Tilt     | 0.055 | 0.279                                | 0.116                              | 0.450          | NO     |
|                                                                                                  | Right Touch   |       | 0.285                                | 0.392                              | 0.677          | NO     |
|                                                                                                  | Right Tilt    |       | 0.367                                | 0.313                              | 0.68           | NO     |
| LTE 66                                                                                           | Left Touch    | 0.089 | 0.193                                | 0.079                              | 0.361          | NO     |
|                                                                                                  | Left Tilt     | 0.082 | 0.279                                | 0.116                              | 0.477          | NO     |
|                                                                                                  | Right Touch   | 0.125 | 0.285                                | 0.392                              | 0.802          | NO     |
|                                                                                                  | Right Tilt    | 0.082 | 0.367                                | 0.313                              | 0.762          | NO     |

## 14.2 Body-Worn SAR Simultaneous Transmission Analysis.

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN&BT |               |       |                                       |                                        |                                           |                                          |       |                     |                     |                     |                     |                     |                     |               |
|-------------------------------------------------------------------------------|---------------|-------|---------------------------------------|----------------------------------------|-------------------------------------------|------------------------------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------|
| Band                                                                          | Configuration | Main  | 5GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 5 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | 2.4GHz<br>z SISO<br>Ant1<br>SAR<br>(W/kg) | 2.4 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | BT    | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | SP<br>LS<br>R |
|                                                                               |               | 1     | 2                                     | 3                                      | 4                                         | 5                                        | 6     | 1+2                 | 1+3                 | 1+4                 | 1+5                 | 1+6                 | 1+4+5               | Yes<br>/No    |
| GSM850                                                                        | Rear          | 0.358 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.606               | 0.872               | 0.506               | 0.466               | 0.521               | 0.614               | NO            |
|                                                                               | Front         | 0.356 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.410               | 0.367               | 0.433               | 0.366               | 0.449               | 0.443               | NO            |
| GSM1900                                                                       | Rear          | 0.531 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.779               | 1.045               | 0.679               | 0.639               | 0.694               | 0.787               | NO            |
|                                                                               | Front         | 0.427 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.481               | 0.438               | 0.504               | 0.437               | 0.52                | 0.514               | NO            |
| WCDMA2                                                                        | Rear          | 0.444 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.692               | 0.958               | 0.592               | 0.552               | 0.607               | 0.700               | NO            |
|                                                                               | Front         | 0.363 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.417               | 0.374               | 0.440               | 0.373               | 0.456               | 0.450               | NO            |
| WCDMA4                                                                        | Rear          | 0.479 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.727               | 0.993               | 0.627               | 0.587               | 0.642               | 0.735               | NO            |
|                                                                               | Front         | 0.373 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.427               | 0.384               | 0.450               | 0.383               | 0.466               | 0.460               | NO            |
| WCDMA5                                                                        | Rear          | 0.268 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.516               | 0.782               | 0.416               | 0.376               | 0.431               | 0.524               | NO            |
|                                                                               | Front         | 0.228 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.282               | 0.239               | 0.305               | 0.238               | 0.321               | 0.315               | NO            |
| LTE 2                                                                         | Rear          | 0.7   | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.948               | 1.214               | 0.848               | 0.808               | 0.863               | 0.956               | NO            |
|                                                                               | Front         | 0.679 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.733               | 0.690               | 0.756               | 0.689               | 0.772               | 0.766               | NO            |
| LTE 5                                                                         | Rear          | 0.394 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.642               | 0.908               | 0.542               | 0.502               | 0.557               | 0.650               | NO            |
|                                                                               | Front         | 0.243 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.297               | 0.254               | 0.320               | 0.253               | 0.336               | 0.330               | NO            |
| LTE 12/17                                                                     | Rear          | 0.078 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.326               | 0.592               | 0.226               | 0.186               | 0.241               | 0.334               | NO            |
|                                                                               | Front         | 0.058 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.112               | 0.069               | 0.135               | 0.068               | 0.151               | 0.145               | NO            |
| LTE 13                                                                        | Rear          | 0.23  | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.478               | 0.744               | 0.378               | 0.338               | 0.393               | 0.486               | NO            |
|                                                                               | Front         | 0.163 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.217               | 0.174               | 0.240               | 0.173               | 0.256               | 0.250               | NO            |
| LTE 25                                                                        | Rear          | 0.555 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.803               | 1.069               | 0.703               | 0.663               | 0.718               | 0.811               | NO            |
|                                                                               | Front         | 0.434 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.488               | 0.445               | 0.511               | 0.444               | 0.527               | 0.521               | NO            |
| LTE 26                                                                        | Rear          | 0.288 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.536               | 0.802               | 0.436               | 0.396               | 0.451               | 0.544               | NO            |
|                                                                               | Front         | 0.231 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.285               | 0.242               | 0.308               | 0.241               | 0.324               | 0.318               | NO            |
| LTE 41(PC3)                                                                   | Rear          | 0.466 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.714               | 0.980               | 0.614               | 0.574               | 0.629               | 0.722               | NO            |
|                                                                               | Front         | 0.328 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.382               | 0.339               | 0.405               | 0.338               | 0.421               | 0.415               | NO            |
| LTE 41(PC2)                                                                   | Rear          | 0.398 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.646               | 0.912               | 0.546               | 0.506               | 0.561               | 0.654               | NO            |
|                                                                               | Front         |       | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.054               | 0.011               | 0.077               | 0.010               | 0.093               | 0.087               | NO            |
| LTE 4/66                                                                      | Rear          | 0.556 | 0.248                                 | 0.514                                  | 0.148                                     | 0.108                                    | 0.163 | 0.804               | 1.070               | 0.704               | 0.664               | 0.719               | 0.812               | NO            |
|                                                                               | Front         | 0.452 | 0.054                                 | 0.011                                  | 0.077                                     | 0.010                                    | 0.093 | 0.506               | 0.463               | 0.529               | 0.462               | 0.545               | 0.539               | NO            |

| Simultaneous Transmission Summation Scenario with 5 GHz WLAN & Bluetooth |               |       |                      |       |                |        |
|--------------------------------------------------------------------------|---------------|-------|----------------------|-------|----------------|--------|
| Band                                                                     | Configuration | Main  | 5GHz MIMO SAR (W/kg) | BT    | $\sum$ 1-g SAR | SPLSR  |
|                                                                          |               | 1     | 2                    | 3     | 1+2+3          | Yes/No |
| GSM850                                                                   | Rear          | 0.358 | 0.661                | 0.163 | 1.182          | NO     |
|                                                                          | Front         | 0.356 | 0.060                | 0.093 | 0.509          | NO     |
| GSM1900                                                                  | Rear          | 0.531 | 0.661                | 0.163 | 1.355          | NO     |
|                                                                          | Front         | 0.427 | 0.060                | 0.093 | 0.580          | NO     |
| UMTS Band 2                                                              | Rear          | 0.444 | 0.661                | 0.163 | 1.268          | NO     |
|                                                                          | Front         | 0.363 | 0.060                | 0.093 | 0.516          | NO     |
| UMTS Band 4                                                              | Rear          | 0.479 | 0.661                | 0.163 | 1.303          | NO     |
|                                                                          | Front         | 0.373 | 0.060                | 0.093 | 0.526          | NO     |
| UMTS Band 5                                                              | Rear          | 0.268 | 0.661                | 0.163 | 1.092          | NO     |
|                                                                          | Front         | 0.228 | 0.060                | 0.093 | 0.381          | NO     |
| LTE 2                                                                    | Rear          | 0.700 | 0.661                | 0.163 | 1.524          | NO     |
|                                                                          | Front         | 0.679 | 0.060                | 0.093 | 0.832          | NO     |
| LTE 5                                                                    | Rear          | 0.394 | 0.661                | 0.163 | 1.218          | NO     |
|                                                                          | Front         | 0.243 | 0.060                | 0.093 | 0.396          | NO     |
| LTE 12                                                                   | Rear          | 0.078 | 0.661                | 0.163 | 0.902          | NO     |
|                                                                          | Front         | 0.058 | 0.060                | 0.093 | 0.211          | NO     |
| LTE 13                                                                   | Rear          | 0.230 | 0.661                | 0.163 | 1.054          | NO     |
|                                                                          | Front         | 0.163 | 0.060                | 0.093 | 0.316          | NO     |
| LTE 25                                                                   | Rear          | 0.555 | 0.661                | 0.163 | 1.379          | NO     |
|                                                                          | Front         | 0.434 | 0.060                | 0.093 | 0.587          | NO     |
| LTE 26                                                                   | Rear          | 0.288 | 0.661                | 0.163 | 1.112          | NO     |
|                                                                          | Front         | 0.231 | 0.060                | 0.093 | 0.384          | NO     |
| LTE 41(PC3)                                                              | Rear          | 0.466 | 0.661                | 0.163 | 1.290          | NO     |
|                                                                          | Front         | 0.328 | 0.060                | 0.093 | 0.481          | NO     |
| LTE 41(PC2)                                                              | Rear          | 0.398 | 0.661                | 0.163 | 1.222          | NO     |
|                                                                          | Front         |       | 0.060                | 0.093 | 0.153          | NO     |
| LTE 66                                                                   | Rear          | 0.556 | 0.661                | 0.163 | 1.380          | NO     |
|                                                                          | Front         | 0.452 | 0.060                | 0.093 | 0.605          | NO     |

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN |               |       |                                      |                                 |                |        |
|----------------------------------------------------------------------------|---------------|-------|--------------------------------------|---------------------------------|----------------|--------|
| Band                                                                       | Configuration | Main  | 2.4GHz<br>RSDB MIMO<br>SAR<br>(W/kg) | 5GHz RSDB<br>MIMO SAR<br>(W/kg) | $\sum$ 1-g SAR | SPLSR  |
|                                                                            |               | 1     | 2                                    | 3                               | 1+2+3          | Yes/No |
| GSM850                                                                     | Rear          | 0.358 | 0.158                                | 0.387                           | 0.903          | NO     |
|                                                                            | Front         | 0.356 | 0.064                                | 0.016                           | 0.436          | NO     |
| GSM1900                                                                    | Rear          | 0.531 | 0.158                                | 0.387                           | 1.076          | NO     |
|                                                                            | Front         | 0.427 | 0.064                                | 0.016                           | 0.507          | NO     |
| UMTS Band 2                                                                | Rear          | 0.444 | 0.158                                | 0.387                           | 0.989          | NO     |
|                                                                            | Front         | 0.363 | 0.064                                | 0.016                           | 0.443          | NO     |
| UMTS Band 4                                                                | Rear          | 0.479 | 0.158                                | 0.387                           | 1.024          | NO     |
|                                                                            | Front         | 0.373 | 0.064                                | 0.016                           | 0.453          | NO     |
| UMTS Band 5                                                                | Rear          | 0.268 | 0.158                                | 0.387                           | 0.813          | NO     |
|                                                                            | Front         | 0.228 | 0.064                                | 0.016                           | 0.308          | NO     |
| LTE 2                                                                      | Rear          | 0.700 | 0.158                                | 0.387                           | 1.245          | NO     |
|                                                                            | Front         | 0.679 | 0.064                                | 0.016                           | 0.759          | NO     |
| LTE 5                                                                      | Rear          | 0.394 | 0.158                                | 0.387                           | 0.939          | NO     |
|                                                                            | Front         | 0.243 | 0.064                                | 0.016                           | 0.323          | NO     |
| LTE 12                                                                     | Rear          | 0.078 | 0.158                                | 0.387                           | 0.623          | NO     |
|                                                                            | Front         | 0.058 | 0.064                                | 0.016                           | 0.138          | NO     |
| LTE 13                                                                     | Rear          | 0.230 | 0.158                                | 0.387                           | 0.775          | NO     |
|                                                                            | Front         | 0.163 | 0.064                                | 0.016                           | 0.243          | NO     |
| LTE 25                                                                     | Rear          | 0.555 | 0.158                                | 0.387                           | 1.100          | NO     |
|                                                                            | Front         | 0.434 | 0.064                                | 0.016                           | 0.514          | NO     |
| LTE 26                                                                     | Rear          | 0.288 | 0.158                                | 0.387                           | 0.833          | NO     |
|                                                                            | Front         | 0.231 | 0.064                                | 0.016                           | 0.311          | NO     |
| LTE 41(PC3)                                                                | Rear          | 0.466 | 0.158                                | 0.387                           | 1.011          | NO     |
|                                                                            | Front         | 0.328 | 0.064                                | 0.016                           | 0.408          | NO     |
| LTE 41(PC2)                                                                | Rear          | 0.398 | 0.158                                | 0.387                           | 0.943          | NO     |
|                                                                            | Front         |       | 0.064                                | 0.016                           | 0.080          | NO     |
| LTE 66                                                                     | Rear          | 0.556 | 0.158                                | 0.387                           | 1.101          | NO     |
|                                                                            | Front         | 0.452 | 0.064                                | 0.016                           | 0.532          | NO     |

### 14.3 Hotspot SAR Simultaneous Transmission Analysis.

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN&BT |               |       |                                       |                                        |                                         |                                             |       |                     |                     |                     |                     |                     |                     |        |
|-------------------------------------------------------------------------------|---------------|-------|---------------------------------------|----------------------------------------|-----------------------------------------|---------------------------------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------|
| Band                                                                          | Configuration | Main  | 5GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 5 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | 2.4GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 2.4<br>GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | BT    | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | SPLSR  |
|                                                                               |               | 1     | 2                                     | 3                                      | 4                                       | 5                                           | 6     | 1+2                 | 1+3                 | 1+4                 | 1+5                 | 1+6                 | 1+4+5               | Yes/No |
| GSM850                                                                        | Rear          | 0.624 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.944               | 1.081               | 0.923               | 0.984               | 0.960               | 1.283               | NO     |
|                                                                               | Front         | 0.523 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.603               | 0.539               | 0.680               | 0.552               | 0.690               | 0.709               | NO     |
|                                                                               | Left          | 0.289 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.421               | 0.410               | 0.356               | 0.355               | 0.343               | 0.422               | NO     |
|                                                                               | Right         | 0.092 |                                       |                                        |                                         |                                             |       | 0.092               | 0.092               | 0.092               | 0.092               | 0.092               | 0.092               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.479 |                                       |                                        |                                         |                                             |       | 0.479               | 0.479               | 0.479               | 0.479               | 0.479               | 0.479               | NO     |
| GSM1900                                                                       | Rear          | 0.419 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.739               | 0.876               | 0.718               | 0.779               | 0.755               | 1.078               | NO     |
|                                                                               | Front         | 0.337 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.417               | 0.353               | 0.494               | 0.366               | 0.504               | 0.523               | NO     |
|                                                                               | Left          | 0.043 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.175               | 0.164               | 0.110               | 0.109               | 0.097               | 0.176               | NO     |
|                                                                               | Right         | 0.058 |                                       |                                        |                                         |                                             |       | 0.058               | 0.058               | 0.058               | 0.058               | 0.058               | 0.058               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 1.096 |                                       |                                        |                                         |                                             |       | 1.096               | 1.096               | 1.096               | 1.096               | 1.096               | 1.096               | NO     |
| WCDMA2                                                                        | Rear          | 0.505 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.825               | 0.962               | 0.804               | 0.865               | 0.841               | 1.164               | NO     |
|                                                                               | Front         | 0.390 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.470               | 0.406               | 0.547               | 0.419               | 0.557               | 0.576               | NO     |
|                                                                               | Left          | 0.040 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.172               | 0.161               | 0.107               | 0.106               | 0.094               | 0.173               | NO     |
|                                                                               | Right         | 0.042 |                                       |                                        |                                         |                                             |       | 0.042               | 0.042               | 0.042               | 0.042               | 0.042               | 0.042               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 1.077 |                                       |                                        |                                         |                                             |       | 1.077               | 1.077               | 1.077               | 1.077               | 1.077               | 1.077               | NO     |
| WCDMA4                                                                        | Rear          | 0.568 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.888               | 1.025               | 0.867               | 0.928               | 0.904               | 1.227               | NO     |
|                                                                               | Front         | 0.429 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.509               | 0.445               | 0.586               | 0.458               | 0.596               | 0.615               | NO     |
|                                                                               | Left          | 0.038 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.170               | 0.159               | 0.105               | 0.104               | 0.092               | 0.171               | NO     |
|                                                                               | Right         | 0.066 |                                       |                                        |                                         |                                             |       | 0.066               | 0.066               | 0.066               | 0.066               | 0.066               | 0.066               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.949 |                                       |                                        |                                         |                                             |       | 0.949               | 0.949               | 0.949               | 0.949               | 0.949               | 0.949               | NO     |
| WCDMA5                                                                        | Rear          | 0.501 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.821               | 0.958               | 0.800               | 0.861               | 0.837               | 1.160               | NO     |
|                                                                               | Front         | 0.378 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.458               | 0.394               | 0.535               | 0.407               | 0.545               | 0.564               | NO     |
|                                                                               | Left          | 0.205 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.337               | 0.326               | 0.272               | 0.271               | 0.259               | 0.338               | NO     |
|                                                                               | Right         | 0.100 |                                       |                                        |                                         |                                             |       | 0.100               | 0.100               | 0.100               | 0.100               | 0.100               | 0.100               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.328 |                                       |                                        |                                         |                                             |       | 0.328               | 0.328               | 0.328               | 0.328               | 0.328               | 0.328               | NO     |
| LTE 2                                                                         | Rear          | 0.437 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.757               | 0.894               | 0.736               | 0.797               | 0.773               | 1.096               | NO     |
|                                                                               | Front         | 0.353 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.433               | 0.369               | 0.510               | 0.382               | 0.520               | 0.539               | NO     |
|                                                                               | Left          | 0.034 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.166               | 0.155               | 0.101               | 0.100               | 0.088               | 0.167               | NO     |
|                                                                               | Right         | 0.057 |                                       |                                        |                                         |                                             |       | 0.057               | 0.057               | 0.057               | 0.057               | 0.057               | 0.057               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 1.008 |                                       |                                        |                                         |                                             |       | 1.008               | 1.008               | 1.008               | 1.008               | 1.008               | 1.008               | NO     |

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN&BT |               |       |                                       |                                        |                                         |                                             |       |                     |                     |                     |                     |                     |                     |        |
|-------------------------------------------------------------------------------|---------------|-------|---------------------------------------|----------------------------------------|-----------------------------------------|---------------------------------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------|
| Band                                                                          | Configuration | Main  | 5GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 5 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | 2.4GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 2.4<br>GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | BT    | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | SPLSR  |
|                                                                               |               | 1     | 2                                     | 3                                      | 4                                       | 5                                           | 6     | 1+2                 | 1+3                 | 1+4                 | 1+5                 | 1+6                 | 1+4+5               | Yes/No |
| LTE 5                                                                         | Rear          | 0.645 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.965               | 1.102               | 0.944               | 1.005               | 0.981               | 1.304               | NO     |
|                                                                               | Front         | 0.404 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.484               | 0.420               | 0.561               | 0.433               | 0.571               | 0.590               | NO     |
|                                                                               | Left          | 0.183 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.315               | 0.304               | 0.250               | 0.249               | 0.237               | 0.316               | NO     |
|                                                                               | Right         | 0.084 |                                       |                                        |                                         |                                             |       | 0.084               | 0.084               | 0.084               | 0.084               | 0.084               | 0.084               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.355 |                                       |                                        |                                         |                                             |       | 0.355               | 0.355               | 0.355               | 0.355               | 0.355               | 0.355               | NO     |
| LTE 12/17                                                                     | Rear          | 0.219 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.539               | 0.676               | 0.518               | 0.579               | 0.555               | 0.878               | NO     |
|                                                                               | Front         | 0.104 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.184               | 0.120               | 0.261               | 0.133               | 0.271               | 0.290               | NO     |
|                                                                               | Left          | 0.107 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.239               | 0.228               | 0.174               | 0.173               | 0.161               | 0.240               | NO     |
|                                                                               | Right         | 0.056 |                                       |                                        |                                         |                                             |       | 0.056               | 0.056               | 0.056               | 0.056               | 0.056               | 0.056               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.107 |                                       |                                        |                                         |                                             |       | 0.107               | 0.107               | 0.107               | 0.107               | 0.107               | 0.107               | NO     |
| LTE 13                                                                        | Rear          | 0.310 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.630               | 0.767               | 0.609               | 0.670               | 0.646               | 0.969               | NO     |
|                                                                               | Front         | 0.225 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.305               | 0.241               | 0.382               | 0.254               | 0.392               | 0.411               | NO     |
|                                                                               | Left          | 0.169 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.301               | 0.290               | 0.236               | 0.235               | 0.223               | 0.302               | NO     |
|                                                                               | Right         | 0.072 |                                       |                                        |                                         |                                             |       | 0.072               | 0.072               | 0.072               | 0.072               | 0.072               | 0.072               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.226 |                                       |                                        |                                         |                                             |       | 0.226               | 0.226               | 0.226               | 0.226               | 0.226               | 0.226               | NO     |
| LTE 25                                                                        | Rear          | 0.410 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.730               | 0.867               | 0.709               | 0.770               | 0.746               | 1.069               | NO     |
|                                                                               | Front         | 0.432 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.512               | 0.448               | 0.589               | 0.461               | 0.599               | 0.618               | NO     |
|                                                                               | Left          | 0.049 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.181               | 0.170               | 0.116               | 0.115               | 0.103               | 0.182               | NO     |
|                                                                               | Right         | 0.053 |                                       |                                        |                                         |                                             |       | 0.053               | 0.053               | 0.053               | 0.053               | 0.053               | 0.053               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 1.036 |                                       |                                        |                                         |                                             |       | 1.036               | 1.036               | 1.036               | 1.036               | 1.036               | 1.036               | NO     |
| LTE 26                                                                        | Rear          | 0.462 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.782               | 0.919               | 0.761               | 0.822               | 0.798               | 1.121               | NO     |
|                                                                               | Front         | 0.345 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.425               | 0.361               | 0.502               | 0.374               | 0.512               | 0.531               | NO     |
|                                                                               | Left          | 0.174 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.306               | 0.295               | 0.241               | 0.240               | 0.228               | 0.307               | NO     |
|                                                                               | Right         | 0.083 |                                       |                                        |                                         |                                             |       | 0.083               | 0.083               | 0.083               | 0.083               | 0.083               | 0.083               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.339 |                                       |                                        |                                         |                                             |       | 0.339               | 0.339               | 0.339               | 0.339               | 0.339               | 0.339               | NO     |
| LTE 41(PC3)                                                                   | Rear          | 0.449 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.769               | 0.906               | 0.748               | 0.809               | 0.785               | 1.108               | NO     |
|                                                                               | Front         | 0.339 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.419               | 0.355               | 0.496               | 0.368               | 0.506               | 0.525               | NO     |
|                                                                               | Left          |       | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.132               | 0.121               | 0.067               | 0.066               | 0.054               | 0.133               | NO     |
|                                                                               | Right         | 0.328 |                                       |                                        |                                         |                                             |       | 0.328               | 0.328               | 0.328               | 0.328               | 0.328               | 0.328               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.578 |                                       |                                        |                                         |                                             |       | 0.578               | 0.578               | 0.578               | 0.578               | 0.578               | 0.578               | NO     |

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN & 5GHz WLAN&BT |               |       |                                       |                                        |                                         |                                             |       |                     |                     |                     |                     |                     |                     |        |
|-------------------------------------------------------------------------------|---------------|-------|---------------------------------------|----------------------------------------|-----------------------------------------|---------------------------------------------|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------|
| Band                                                                          | Configuration | Main  | 5GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 5 GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | 2.4GHz<br>SISO<br>Ant1<br>SAR<br>(W/kg) | 2.4<br>GHz<br>SISO<br>Ant2<br>SAR<br>(W/kg) | BT    | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | $\Sigma$ 1-g<br>SAR | SPLSR  |
|                                                                               |               | 1     | 2                                     | 3                                      | 4                                       | 5                                           | 6     | 1+2                 | 1+3                 | 1+4                 | 1+5                 | 1+6                 | 1+4+5               | Yes/No |
| LTE 41(PC2)                                                                   | Rear          |       | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.320               | 0.457               | 0.299               | 0.360               | 0.336               | 0.659               | NO     |
|                                                                               | Front         |       | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.080               | 0.016               | 0.157               | 0.029               | 0.167               | 0.186               | NO     |
|                                                                               | Left          |       | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.132               | 0.121               | 0.067               | 0.066               | 0.054               | 0.133               | NO     |
|                                                                               | Right         |       |                                       |                                        |                                         |                                             |       | 0.000               | 0.000               | 0.000               | 0.000               | 0.000               | 0.000               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        |       |                                       |                                        |                                         |                                             |       | 0.000               | 0.000               | 0.000               | 0.000               | 0.000               | 0.000               | NO     |
| LTE 4/66                                                                      | Rear          | 0.489 | 0.320                                 | 0.457                                  | 0.299                                   | 0.360                                       | 0.336 | 0.809               | 0.946               | 0.788               | 0.849               | 0.825               | 1.148               | NO     |
|                                                                               | Front         | 0.466 | 0.080                                 | 0.016                                  | 0.157                                   | 0.029                                       | 0.167 | 0.546               | 0.482               | 0.623               | 0.495               | 0.633               | 0.652               | NO     |
|                                                                               | Left          | 0.066 | 0.132                                 | 0.121                                  | 0.067                                   | 0.066                                       | 0.054 | 0.198               | 0.187               | 0.133               | 0.132               | 0.120               | 0.199               | NO     |
|                                                                               | Right         | 0.103 |                                       |                                        |                                         |                                             |       | 0.103               | 0.103               | 0.103               | 0.103               | 0.103               | 0.103               | NO     |
|                                                                               | Top           |       | 0.104                                 | 0.019                                  | 0.438                                   | 0.052                                       | 0.437 | 0.104               | 0.019               | 0.438               | 0.052               | 0.437               | 0.490               | NO     |
|                                                                               | Bottom        | 0.970 |                                       |                                        |                                         |                                             |       | 0.970               | 0.970               | 0.970               | 0.970               | 0.970               | 0.970               | NO     |

| Simultaneous Transmission Summation Scenario with 5 GHz MIMO WLAN & BT |               |       |                      |           |                |                |        |
|------------------------------------------------------------------------|---------------|-------|----------------------|-----------|----------------|----------------|--------|
| Band                                                                   | Configuration | Main  | 5GHz MIMO SAR (W/kg) | Bluetooth | $\sum$ 1-g SAR | $\sum$ 1-g SAR | SPLSR  |
|                                                                        |               | 1     | 2                    | 3         | 1+2            | 1+2+3          | Yes/No |
| GSM850                                                                 | Rear          | 0.624 | 0.616                | 0.336     | 1.240          | 1.576          | NO     |
|                                                                        | Front         | 0.523 | 0.061                | 0.167     | 0.584          | 0.751          | NO     |
|                                                                        | Left          | 0.289 | 0.140                | 0.054     | 0.429          | 0.483          | NO     |
|                                                                        | Right         | 0.092 |                      |           | 0.092          | 0.092          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.479 |                      |           | 0.479          | 0.479          | NO     |
| GSM1900                                                                | Rear          | 0.419 | 0.616                | 0.336     | 1.035          | 1.371          | NO     |
|                                                                        | Front         | 0.337 | 0.061                | 0.167     | 0.398          | 0.565          | NO     |
|                                                                        | Left          | 0.043 | 0.140                | 0.054     | 0.183          | 0.237          | NO     |
|                                                                        | Right         | 0.058 |                      |           | 0.058          | 0.058          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 1.096 |                      |           | 1.096          | 1.096          | NO     |
| UMTS Band 2                                                            | Rear          | 0.505 | 0.616                | 0.336     | 1.121          | 1.457          | NO     |
|                                                                        | Front         | 0.390 | 0.061                | 0.167     | 0.451          | 0.618          | NO     |
|                                                                        | Left          | 0.040 | 0.140                | 0.054     | 0.180          | 0.234          | NO     |
|                                                                        | Right         | 0.042 |                      |           | 0.042          | 0.042          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 1.077 |                      |           | 1.077          | 1.077          | NO     |
| UMTS Band 4                                                            | Rear          | 0.568 | 0.616                | 0.336     | 1.184          | 1.520          | NO     |
|                                                                        | Front         | 0.429 | 0.061                | 0.167     | 0.490          | 0.657          | NO     |
|                                                                        | Left          | 0.038 | 0.140                | 0.054     | 0.178          | 0.232          | NO     |
|                                                                        | Right         | 0.066 |                      |           | 0.066          | 0.066          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.949 |                      |           | 0.949          | 0.949          | NO     |
| UMTS Band 5                                                            | Rear          | 0.501 | 0.616                | 0.336     | 1.117          | 1.453          | NO     |
|                                                                        | Front         | 0.378 | 0.061                | 0.167     | 0.439          | 0.606          | NO     |
|                                                                        | Left          | 0.205 | 0.140                | 0.054     | 0.345          | 0.399          | NO     |
|                                                                        | Right         | 0.100 |                      |           | 0.100          | 0.100          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.328 |                      |           | 0.328          | 0.328          | NO     |

| Simultaneous Transmission Summation Scenario with 5 GHz MIMO WLAN & BT |               |       |                      |           |                |                |        |
|------------------------------------------------------------------------|---------------|-------|----------------------|-----------|----------------|----------------|--------|
| Band                                                                   | Configuration | Main  | 5GHz MIMO SAR (W/kg) | Bluetooth | $\sum$ 1-g SAR | $\sum$ 1-g SAR | SPLSR  |
|                                                                        |               | 1     | 2                    | 3         | 1+2            | 1+2+3          | Yes/No |
| LTE 2                                                                  | Rear          | 0.437 | 0.616                | 0.336     | 1.053          | 1.389          | NO     |
|                                                                        | Front         | 0.353 | 0.061                | 0.167     | 0.414          | 0.581          | NO     |
|                                                                        | Left          | 0.034 | 0.140                | 0.054     | 0.174          | 0.228          | NO     |
|                                                                        | Right         | 0.057 |                      |           | 0.057          | 0.057          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 1.008 |                      |           | 1.008          | 1.008          | NO     |
| LTE 5                                                                  | Rear          | 0.645 | 0.616                | 0.336     | 1.261          | 1.597          | NO     |
|                                                                        | Front         | 0.404 | 0.061                | 0.167     | 0.465          | 0.632          | NO     |
|                                                                        | Left          | 0.183 | 0.140                | 0.054     | 0.323          | 0.377          | NO     |
|                                                                        | Right         | 0.084 |                      |           | 0.084          | 0.084          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.355 |                      |           | 0.355          | 0.355          | NO     |
| LTE 12                                                                 | Rear          | 0.219 | 0.616                | 0.336     | 0.835          | 1.171          | NO     |
|                                                                        | Front         | 0.104 | 0.061                | 0.167     | 0.165          | 0.332          | NO     |
|                                                                        | Left          | 0.107 | 0.140                | 0.054     | 0.247          | 0.301          | NO     |
|                                                                        | Right         | 0.056 |                      |           | 0.056          | 0.056          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.107 |                      |           | 0.107          | 0.107          | NO     |
| LTE 13                                                                 | Rear          | 0.310 | 0.616                | 0.336     | 0.926          | 1.262          | NO     |
|                                                                        | Front         | 0.225 | 0.061                | 0.167     | 0.286          | 0.453          | NO     |
|                                                                        | Left          | 0.169 | 0.140                | 0.054     | 0.309          | 0.363          | NO     |
|                                                                        | Right         | 0.072 |                      |           | 0.072          | 0.072          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.226 |                      |           | 0.226          | 0.226          | NO     |
| LTE 25                                                                 | Rear          | 0.410 | 0.616                | 0.336     | 1.026          | 1.362          | NO     |
|                                                                        | Front         | 0.432 | 0.061                | 0.167     | 0.493          | 0.660          | NO     |
|                                                                        | Left          | 0.049 | 0.140                | 0.054     | 0.189          | 0.243          | NO     |
|                                                                        | Right         | 0.053 |                      |           | 0.053          | 0.053          | NO     |
|                                                                        | Top           |       | 0.120                | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 1.036 |                      |           | 1.036          | 1.036          | NO     |

| Simultaneous Transmission Summation Scenario with 5 GHz MIMO WLAN & BT |               |       |                               |           |                |                |        |
|------------------------------------------------------------------------|---------------|-------|-------------------------------|-----------|----------------|----------------|--------|
| Band                                                                   | Configuration | Main  | 5GHz<br>MIMO<br>SAR<br>(W/kg) | Bluetooth | $\sum$ 1-g SAR | $\sum$ 1-g SAR | SPLSR  |
|                                                                        |               | 1     | 2                             | 3         | 1+2            | 1+2+3          | Yes/No |
| LTE 26                                                                 | Rear          | 0.462 | 0.616                         | 0.336     | 1.078          | 1.414          | NO     |
|                                                                        | Front         | 0.345 | 0.061                         | 0.167     | 0.406          | 0.573          | NO     |
|                                                                        | Left          | 0.174 | 0.140                         | 0.054     | 0.314          | 0.368          | NO     |
|                                                                        | Right         | 0.083 |                               |           | 0.083          | 0.083          | NO     |
|                                                                        | Top           |       | 0.120                         | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.339 |                               |           | 0.339          | 0.339          | NO     |
| LTE 41(PC3)                                                            | Rear          | 0.449 | 0.616                         | 0.336     | 1.065          | 1.401          | NO     |
|                                                                        | Front         | 0.339 | 0.061                         | 0.167     | 0.400          | 0.567          | NO     |
|                                                                        | Left          |       | 0.140                         | 0.054     | 0.140          | 0.194          | NO     |
|                                                                        | Right         | 0.328 |                               |           | 0.328          | 0.328          | NO     |
|                                                                        | Top           |       | 0.120                         | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.578 |                               |           | 0.578          | 0.578          | NO     |
| LTE 41(PC2)                                                            | Rear          |       | 0.616                         | 0.336     | 0.616          | 0.952          | NO     |
|                                                                        | Front         |       | 0.061                         | 0.167     | 0.061          | 0.228          | NO     |
|                                                                        | Left          |       | 0.140                         | 0.054     | 0.140          | 0.194          | NO     |
|                                                                        | Right         |       |                               |           | 0.000          | 0.000          | NO     |
|                                                                        | Top           |       | 0.120                         | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        |       |                               |           | 0.000          | 0.000          | NO     |
| LTE 66                                                                 | Rear          | 0.489 | 0.616                         | 0.336     | 1.105          | 1.441          | NO     |
|                                                                        | Front         | 0.466 | 0.061                         | 0.167     | 0.527          | 0.694          | NO     |
|                                                                        | Left          | 0.066 | 0.140                         | 0.054     | 0.206          | 0.260          | NO     |
|                                                                        | Right         | 0.103 |                               |           | 0.103          | 0.103          | NO     |
|                                                                        | Top           |       | 0.120                         | 0.437     | 0.120          | 0.557          | NO     |
|                                                                        | Bottom        | 0.970 |                               |           | 0.970          | 0.970          | NO     |

| Simultaneous Transmission Summation Scenario with 2.4 GHz MIMO WLAN & 5 GHz MIMO WLAN(RSDB) |               |       |                             |                           |                |        |
|---------------------------------------------------------------------------------------------|---------------|-------|-----------------------------|---------------------------|----------------|--------|
| Band                                                                                        | Configuration | Main  | 2.4GHz RSDB MIMO SAR (W/kg) | 5GHz RSDB MIMO SAR (W/kg) | $\sum$ 1-g SAR | SPLSR  |
|                                                                                             |               | 1     | 2                           | 3                         | 1+2+3          | Yes/No |
| GSM850                                                                                      | Rear          | 0.624 | 0.313                       | 0.208                     | 1.145          | NO     |
|                                                                                             | Front         | 0.523 | 0.122                       | 0.008                     | 0.653          | NO     |
|                                                                                             | Left          | 0.289 | 0.065                       | 0.086                     | 0.440          | NO     |
|                                                                                             | Right         | 0.092 |                             |                           | 0.092          | NO     |
|                                                                                             | Top           |       | 0.464                       | 0.077                     | 0.541          | NO     |
|                                                                                             | Bottom        | 0.479 |                             |                           | 0.479          | NO     |
| GSM1900                                                                                     | Rear          | 0.419 | 0.313                       | 0.208                     | 0.940          | NO     |
|                                                                                             | Front         | 0.337 | 0.122                       | 0.008                     | 0.467          | NO     |
|                                                                                             | Left          | 0.043 | 0.065                       | 0.086                     | 0.194          | NO     |
|                                                                                             | Right         | 0.058 |                             |                           | 0.058          | NO     |
|                                                                                             | Top           |       | 0.464                       | 0.077                     | 0.541          | NO     |
|                                                                                             | Bottom        | 1.096 |                             |                           | 1.096          | NO     |
| UMTS Band 2                                                                                 | Rear          | 0.505 | 0.313                       | 0.208                     | 1.026          | NO     |
|                                                                                             | Front         | 0.390 | 0.122                       | 0.008                     | 0.520          | NO     |
|                                                                                             | Left          | 0.040 | 0.065                       | 0.086                     | 0.191          | NO     |
|                                                                                             | Right         | 0.042 |                             |                           | 0.042          | NO     |
|                                                                                             | Top           |       | 0.464                       | 0.077                     | 0.541          | NO     |
|                                                                                             | Bottom        | 1.077 |                             |                           | 1.077          | NO     |
| UMTS Band 4                                                                                 | Rear          | 0.568 | 0.313                       | 0.208                     | 1.089          | NO     |
|                                                                                             | Front         | 0.429 | 0.122                       | 0.008                     | 0.559          | NO     |
|                                                                                             | Left          | 0.038 | 0.065                       | 0.086                     | 0.189          | NO     |
|                                                                                             | Right         | 0.066 |                             |                           | 0.066          | NO     |
|                                                                                             | Top           |       | 0.464                       | 0.077                     | 0.541          | NO     |
|                                                                                             | Bottom        | 0.949 |                             |                           | 0.949          | NO     |
| UMTS Band 5                                                                                 | Rear          | 0.501 | 0.313                       | 0.208                     | 1.022          | NO     |
|                                                                                             | Front         | 0.378 | 0.122                       | 0.008                     | 0.508          | NO     |
|                                                                                             | Left          | 0.205 | 0.065                       | 0.086                     | 0.356          | NO     |
|                                                                                             | Right         | 0.100 |                             |                           | 0.100          | NO     |
|                                                                                             | Top           |       | 0.464                       | 0.077                     | 0.541          | NO     |
|                                                                                             | Bottom        | 0.328 |                             |                           | 0.328          | NO     |

| Simultaneous Transmission Summation Scenario with 2.4 GHz MIMO WLAN & 5 GHz MIMO WLAN |               |       |                                         |                                       |                |        |
|---------------------------------------------------------------------------------------|---------------|-------|-----------------------------------------|---------------------------------------|----------------|--------|
| Band                                                                                  | Configuration | Main  | 2.4GHz<br>RSDB<br>MIMO<br>SAR<br>(W/kg) | 5GHz<br>RSDB<br>MIMO<br>SAR<br>(W/kg) | $\sum$ 1-g SAR | SPLSR  |
|                                                                                       |               | 1     | 2                                       | 3                                     | 1+2+3          | Yes/No |
| LTE 2                                                                                 | Rear          | 0.437 | 0.313                                   | 0.208                                 | 0.958          | NO     |
|                                                                                       | Front         | 0.353 | 0.122                                   | 0.008                                 | 0.483          | NO     |
|                                                                                       | Left          | 0.034 | 0.065                                   | 0.086                                 | 0.185          | NO     |
|                                                                                       | Right         | 0.057 |                                         |                                       | 0.057          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        | 1.008 |                                         |                                       | 1.008          | NO     |
| LTE 5                                                                                 | Rear          | 0.645 | 0.313                                   | 0.208                                 | 1.166          | NO     |
|                                                                                       | Front         | 0.404 | 0.122                                   | 0.008                                 | 0.534          | NO     |
|                                                                                       | Left          | 0.183 | 0.065                                   | 0.086                                 | 0.334          | NO     |
|                                                                                       | Right         | 0.084 |                                         |                                       | 0.084          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        | 0.355 |                                         |                                       | 0.355          | NO     |
| LTE 12                                                                                | Rear          | 0.219 | 0.313                                   | 0.208                                 | 0.740          | NO     |
|                                                                                       | Front         | 0.104 | 0.122                                   | 0.008                                 | 0.234          | NO     |
|                                                                                       | Left          | 0.107 | 0.065                                   | 0.086                                 | 0.258          | NO     |
|                                                                                       | Right         | 0.056 |                                         |                                       | 0.056          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        | 0.107 |                                         |                                       | 0.107          | NO     |
| LTE 13                                                                                | Rear          | 0.31  | 0.313                                   | 0.208                                 | 0.831          | NO     |
|                                                                                       | Front         | 0.225 | 0.122                                   | 0.008                                 | 0.355          | NO     |
|                                                                                       | Left          | 0.169 | 0.065                                   | 0.086                                 | 0.320          | NO     |
|                                                                                       | Right         | 0.072 |                                         |                                       | 0.072          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        | 0.226 |                                         |                                       | 0.226          | NO     |
| LTE 25                                                                                | Rear          | 0.41  | 0.313                                   | 0.208                                 | 0.931          | NO     |
|                                                                                       | Front         | 0.432 | 0.122                                   | 0.008                                 | 0.562          | NO     |
|                                                                                       | Left          | 0.049 | 0.065                                   | 0.086                                 | 0.200          | NO     |
|                                                                                       | Right         | 0.053 |                                         |                                       | 0.053          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        | 1.036 |                                         |                                       | 1.036          | NO     |

| Simultaneous Transmission Summation Scenario with 2.4 GHz MIMO WLAN & 5 GHz MIMO WLAN |               |       |                                         |                                       |                |        |
|---------------------------------------------------------------------------------------|---------------|-------|-----------------------------------------|---------------------------------------|----------------|--------|
| Band                                                                                  | Configuration | Main  | 2.4GHz<br>RSDB<br>MIMO<br>SAR<br>(W/kg) | 5GHz<br>RSDB<br>MIMO<br>SAR<br>(W/kg) | $\sum$ 1-g SAR | SPLSR  |
|                                                                                       |               | 1     | 2                                       | 3                                     | 1+2+3          | Yes/No |
| LTE 26                                                                                | Rear          | 0.462 | 0.313                                   | 0.208                                 | 0.983          | NO     |
|                                                                                       | Front         | 0.345 | 0.122                                   | 0.008                                 | 0.475          | NO     |
|                                                                                       | Left          | 0.174 | 0.065                                   | 0.086                                 | 0.325          | NO     |
|                                                                                       | Right         | 0.083 |                                         |                                       | 0.083          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        | 0.339 |                                         |                                       | 0.339          | NO     |
| LTE 41(PC3)                                                                           | Rear          | 0.449 | 0.313                                   | 0.208                                 | 0.97           | NO     |
|                                                                                       | Front         | 0.339 | 0.122                                   | 0.008                                 | 0.469          | NO     |
|                                                                                       | Left          |       | 0.065                                   | 0.086                                 | 0.151          | NO     |
|                                                                                       | Right         | 0.328 |                                         |                                       | 0.328          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        | 0.578 |                                         |                                       | 0.578          | NO     |
| LTE 41(PC2)                                                                           | Rear          |       | 0.313                                   | 0.208                                 | 0.521          | NO     |
|                                                                                       | Front         |       | 0.122                                   | 0.008                                 | 0.130          | NO     |
|                                                                                       | Left          |       | 0.065                                   | 0.086                                 | 0.151          | NO     |
|                                                                                       | Right         |       |                                         |                                       | 0.000          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        |       |                                         |                                       | 0.000          | NO     |
| LTE 66                                                                                | Rear          | 0.489 | 0.313                                   | 0.208                                 | 1.010          | NO     |
|                                                                                       | Front         | 0.466 | 0.122                                   | 0.008                                 | 0.596          | NO     |
|                                                                                       | Left          | 0.066 | 0.065                                   | 0.086                                 | 0.217          | NO     |
|                                                                                       | Right         | 0.103 |                                         |                                       | 0.103          | NO     |
|                                                                                       | Top           |       | 0.464                                   | 0.077                                 | 0.541          | NO     |
|                                                                                       | Bottom        | 0.970 |                                         |                                       | 0.970          | NO     |

#### 14.4 Phablet SAR Simultaneous Transmission Analysis

| Phablet 10g SAR Simultaneous Transmission Scenario with 5 GHz WLAN |               |       |                           |                           |                      |                |                |                |        |
|--------------------------------------------------------------------|---------------|-------|---------------------------|---------------------------|----------------------|----------------|----------------|----------------|--------|
| Band                                                               | Configuration | Main  | 5GHz SISO Ant1 SAR (W/kg) | 5GHz SISO Ant2 SAR (W/kg) | 5GHz MIMO SAR (W/kg) | $\sum$ 1-g SAR | $\sum$ 1-g SAR | $\sum$ 1-g SAR | SPLSR  |
|                                                                    |               | 1     | 2                         | 3                         | 4                    | 1+2            | 1+3            | 1+4            | Yes/No |
| GSM1900                                                            | Rear          | 0.832 | 0.725                     | 1.556                     | 1.545                | 1.557          | 2.388          | 2.377          | NO     |
|                                                                    | Front         | 1.078 | 0.382                     | 0.056                     | 0.444                | 1.46           | 1.134          | 1.522          | NO     |
|                                                                    | Left          | 0.137 | 0.763                     | 0.298                     | 0.831                | 0.9            | 0.435          | 0.968          | NO     |
|                                                                    | Right         | 0.213 |                           |                           |                      | 0.213          | 0.213          | 0.213          | NO     |
|                                                                    | Top           |       | 0.273                     | 0.149                     | 0.344                | 0.273          | 0.149          | 0.344          | NO     |
|                                                                    | Bottom        | 1.328 |                           |                           |                      | 1.328          | 1.328          | 1.328          | NO     |
| UMTS Band 2                                                        | Rear          | 1.068 | 0.725                     | 1.556                     | 1.545                | 1.793          | 2.624          | 2.613          | NO     |
|                                                                    | Front         | 0.905 | 0.382                     | 0.056                     | 0.444                | 1.287          | 0.961          | 1.349          | NO     |
|                                                                    | Left          | 0.18  | 0.763                     | 0.298                     | 0.831                | 0.943          | 0.478          | 1.011          | NO     |
|                                                                    | Right         | 0.243 |                           |                           |                      | 0.243          | 0.243          | 0.243          | NO     |
|                                                                    | Top           |       | 0.273                     | 0.149                     | 0.344                | 0.273          | 0.149          | 0.344          | NO     |
|                                                                    | Bottom        | 1.759 |                           |                           |                      | 1.759          | 1.759          | 1.759          | NO     |
| UMTS Band 4                                                        | Rear          | 1.287 | 0.725                     | 1.556                     | 1.545                | 2.012          | 2.843          | 2.832          | NO     |
|                                                                    | Front         | 1.276 | 0.382                     | 0.056                     | 0.444                | 1.658          | 1.332          | 1.72           | NO     |
|                                                                    | Left          | 0.224 | 0.763                     | 0.298                     | 0.831                | 0.987          | 0.522          | 1.055          | NO     |
|                                                                    | Right         | 0.156 |                           |                           |                      | 0.156          | 0.156          | 0.156          | NO     |
|                                                                    | Top           |       | 0.273                     | 0.149                     | 0.344                | 0.273          | 0.149          | 0.344          | NO     |
|                                                                    | Bottom        | 1.875 |                           |                           |                      | 1.875          | 1.875          | 1.875          | NO     |
| LTE 2                                                              | Rear          | 1.234 | 0.725                     | 1.556                     | 1.545                | 1.959          | 2.79           | 2.779          | NO     |
|                                                                    | Front         | 1.165 | 0.382                     | 0.056                     | 0.444                | 1.547          | 1.221          | 1.609          | NO     |
|                                                                    | Left          | 0.229 | 0.763                     | 0.298                     | 0.831                | 0.992          | 0.527          | 1.06           | NO     |
|                                                                    | Right         | 0.333 |                           |                           |                      | 0.333          | 0.333          | 0.333          | NO     |
|                                                                    | Top           |       | 0.273                     | 0.149                     | 0.344                | 0.273          | 0.149          | 0.344          | NO     |
|                                                                    | Bottom        | 2.052 |                           |                           |                      | 2.052          | 2.052          | 2.052          | NO     |
| LTE 25                                                             | Rear          | 1.114 | 0.725                     | 1.556                     | 1.545                | 1.839          | 2.67           | 2.659          | NO     |
|                                                                    | Front         | 1.053 | 0.382                     | 0.056                     | 0.444                | 1.435          | 1.109          | 1.497          | NO     |
|                                                                    | Left          | 0.178 | 0.763                     | 0.298                     | 0.831                | 0.941          | 0.476          | 1.009          | NO     |
|                                                                    | Right         | 0.293 |                           |                           |                      | 0.293          | 0.293          | 0.293          | NO     |
|                                                                    | Top           |       | 0.273                     | 0.149                     | 0.344                | 0.273          | 0.149          | 0.344          | NO     |
|                                                                    | Bottom        | 1.406 |                           |                           |                      | 1.406          | 1.406          | 1.406          | NO     |

Phablet 10g SAR Simultaneous Transmission Scenario with 5 GHz WLAN

| Band     | Configuration | Main  | 5GHz SISO Ant1 SAR (W/kg) | 5GHz SISO Ant2 SAR (W/kg) | 5GHz MIMO SAR (W/kg) | $\sum$ 1-g SAR | $\sum$ 1-g SAR | $\sum$ 1-g SAR | SPLSR  |
|----------|---------------|-------|---------------------------|---------------------------|----------------------|----------------|----------------|----------------|--------|
|          |               | 1     | 2                         | 3                         | 4                    | 1+2            | 1+3            | 1+4            | Yes/No |
| LTE 4/66 | Rear          | 1.41  | 0.725                     | 1.556                     | 1.545                | 2.135          | 2.966          | 2.955          | NO     |
|          | Front         | 1.41  | 0.382                     | 0.056                     | 0.444                | 1.792          | 1.466          | 1.854          | NO     |
|          | Left          | 0.183 | 0.763                     | 0.298                     | 0.831                | 0.946          | 0.481          | 1.014          | NO     |
|          | Right         | 0.303 |                           |                           |                      | 0.303          | 0.303          | 0.303          | NO     |
|          | Top           |       | 0.273                     | 0.149                     | 0.344                | 0.273          | 0.149          | 0.344          | NO     |
|          | Bottom        | 2.293 |                           |                           |                      | 2.293          | 2.293          | 2.293          | NO     |

## 14.5 Simultaneous Transmission Conclusion

The above numerical summed SAR Results are sufficient to determine that simultaneous transmission cases will not exceed the SAR Limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE1528-2013.

## 15. SAR Measurement Variability and Uncertainty

In accordance with KDB procedure 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz, SAR additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement variability was assessed using the following procedures for each frequency band:

- 1) Repeated measurement is not required when the original highest measured SAR is  $< 0.80$  W/kg for 1g SAR or  $< 2.0$  W/kg for 10g SAR; steps 2) through 4) do not apply.
- 2) When the original highest measured 1g SAR is  $\geq 0.80$  W/kg or 10g SAR  $\geq 2.0$  W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is  $> 1.20$  or when the original or repeated measurement is  $\geq 1.45$  W/kg for 1g SAR or  $\geq 3.625$  W/kg for 10g SAR ( $\sim 10\%$  from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is  $\geq 1.5$  W/kg for 1g SAR or  $\geq 3.75$  W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .

Hotspot SAR measurement variability Results

| Frequency |         | Mode/Band   | Configuration | Measured SAR (W/kg) | Repeated SAR (W/kg) | SAR Ratio |
|-----------|---------|-------------|---------------|---------------------|---------------------|-----------|
| MHz       | Channel |             |               |                     |                     |           |
| 1 712.4   | 1312    | UMTS Band 4 | Bottom        | 0.819               | 0.818               | 1.00      |
| 1 907.6   | 9538    | UMTS Band 2 | Bottom        | 0.806               | 0.828               | 0.97      |
| 1 900     | 19100   | LTE Band 2  | Bottom        | 0.921               | 0.864               | 1.07      |
| 1 905     | 26590   | LTE Band 25 | Bottom        | 0.955               | 0.952               | 1.00      |
| 1720      | 132072  | LTE Band 66 | Bottom        | 0.857               | 0.853               | 1.00      |

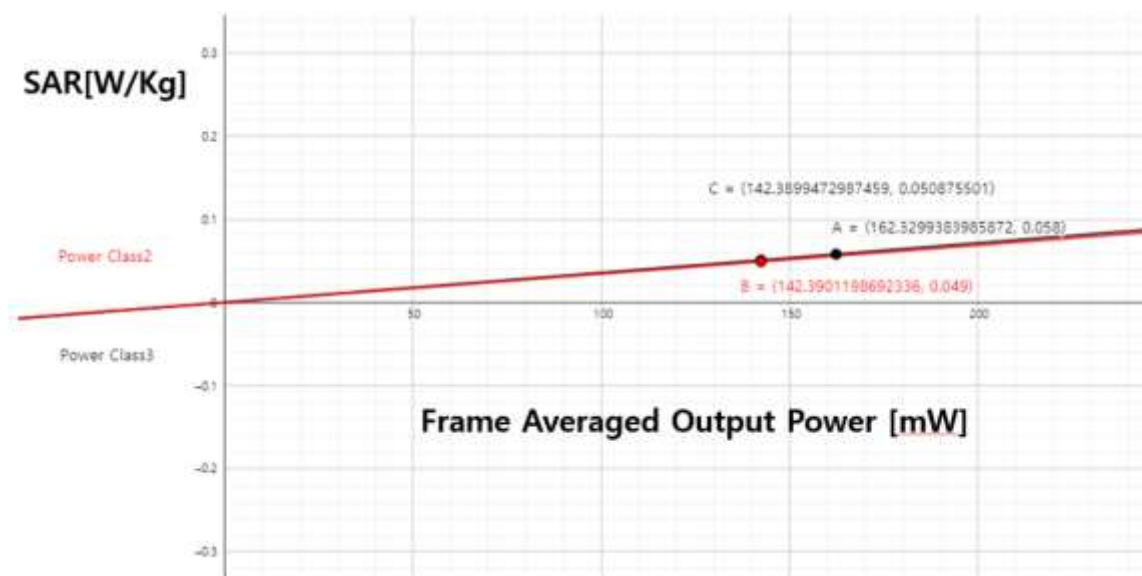
## 16. LTE Band 41 Power Class 2 and Power class 3 Linearity

This Device Supports Power Class 2 and Power Class 3 operations for LTE band 41. The Highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL Configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power class 3. SAR with power class 2 at the highest power and available duty factor was additionally performed for the power class 2 configuration with the Highest SAR for each exposure condition.

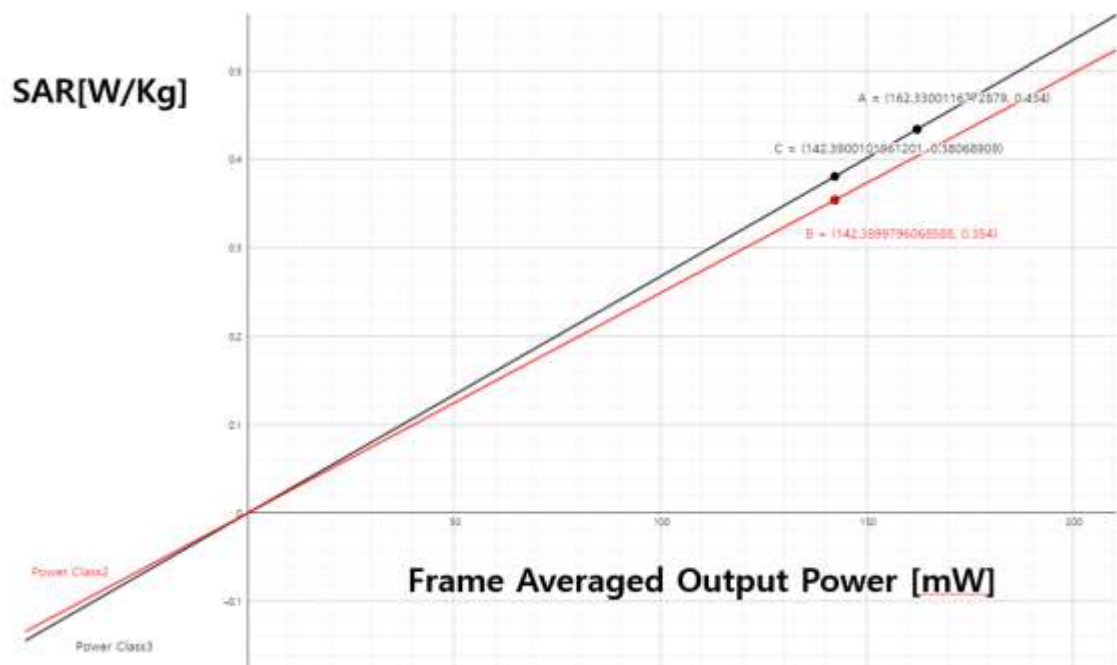
The linearity between the power class 3 and Power class 2 SAR Results and the respective frame averaged powers was calculated to determine the results were linear.

Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes as less than 10 % and all reported SAR values were < 1.4 W/kg

| LTE Band 41 Head Linearity Data Table |                |                |
|---------------------------------------|----------------|----------------|
| Configurations                        | LTE Band41 PC3 | LTE Band41 PC2 |
| Maximum Allowed Output Power[dBm]     | 24.4           | 25.7           |
| Measured Output Power[dBm]            | 24.09          | 25.17          |
| Measured SAR[W/kg]                    | 0.058          | 0.049          |
| Measured Power[mW]                    | 256.45         | 328.85         |
| Duty Cycle                            | 63.30%         | 43.30%         |
| Frame Averaged Output Power[mW]       | 162.33         | 142.39         |
| deviation from expected linearity(%)  | -              | 3.83           |



| LTE Band Body Worn Linearity Data Table |                |                |
|-----------------------------------------|----------------|----------------|
| Configurations                          | LTE Band41 PC3 | LTE Band41 PC2 |
| Maximum Allowed Output Power[dBm]       | 24.4           | 25.7           |
| Measured Output Power[dBm]              | 24.09          | 25.17          |
| Measured SAR[W/kg]                      | 0.434          | 0.354          |
| Measured Power[mW]                      | 256.45         | 328.85         |
| Duty Cycle                              | 63.30%         | 43.30%         |
| Frame Averaged Output Power[mW]         | 162.33         | 142.39         |
| deviation from expected linearity(%)    | -              | 7.54           |



When Power reduction is applied to LTE B41 PC 2(HPUE), The power level of LTE B41 PC2 became same as the reduction power of LTE B41 PC3, therefore Hotspot SAR linearity were not required.

## 17. Measurement Uncertainty

The measured SAR was  $<1.5$  W/Kg for 1g SAR and  $<3.75$  W/Kg For 10g SAR for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

## 18. SAR Test Equipment

| Manufacturer  | Type / Model             | S/N                | Calib. Date | Calib.Interval | Calib.Due  |
|---------------|--------------------------|--------------------|-------------|----------------|------------|
| SPEAG         | Triple Modular Phantom   | -                  | N/A         | N/A            | N/A        |
| SPEAG         | SAM Phantom              | -                  | N/A         | N/A            | N/A        |
| HP            | SAR System Control PC    | -                  | N/A         | N/A            | N/A        |
| Staubli       | CS8Cspeag-TX90           | F11/ 5K3RA1/ C/ 01 | N/A         | N/A            | N/A        |
| Staubli       | CS8Cspeag-TX90           | F13/ 5R4XF1/ C/ 01 | N/A         | N/A            | N/A        |
| Staubli       | CS8Cspeag-TX90           | F08/5AJ0A1/C/01    | N/A         | N/A            | N/A        |
| Staubli       | CS8Cspeag-TX90           | F13/ 5SD0A1/ C/ 01 | N/A         | N/A            | N/A        |
| Staubli       | TX90 XLspeag             | F11/ 5K3RA1/ A/ 01 | N/A         | N/A            | N/A        |
| Staubli       | TX90 XLspeag             | F13/ 5R4XF1/ A/ 01 | N/A         | N/A            | N/A        |
| Staubli       | TX90 XLspeag             | F08/5AJ0A1/A/01    | N/A         | N/A            | N/A        |
| Staubli       | TX90 XLspeag             | F13/ 5SD0A1/ A/ 01 | N/A         | N/A            | N/A        |
| Staubli       | Teach Pendant (Joystick) | S-1203 0309        | N/A         | N/A            | N/A        |
| Staubli       | Teach Pendant (Joystick) | S-1338 1332        | N/A         | N/A            | N/A        |
| Staubli       | Teach Pendant (Joystick) | S-0008             | N/A         | N/A            | N/A        |
| Staubli       | Teach Pendant (Joystick) | SE UKS 030 AA      | N/A         | N/A            | N/A        |
| TESTO         | 175-H1/Thermometer       | 40331936309        | 01/26/2021  | Annual         | 01/26/2022 |
| TESTO         | 175-H1/Thermometer       | 40332651310        | 01/26/2021  | Annual         | 01/26/2022 |
| TESTO         | 175-H1/Thermometer       | 40331949309        | 01/26/2021  | Annual         | 01/26/2022 |
| TESTO         | 175-H1/Thermometer       | 83348029           | 05/06/2021  | Annual         | 05/06/2022 |
| SPEAG         | DAE4                     | 1422               | 05/19/2021  | Annual         | 05/19/2022 |
| SPEAG         | DAE4                     | 869                | 03/29/2021  | Annual         | 03/29/2022 |
| SPEAG         | DAE4                     | 1417               | 02/22/2021  | Annual         | 02/22/2022 |
| SPEAG         | DAE4                     | 1686               | 06/21/2021  | Annual         | 06/21/2022 |
| SPEAG         | E-Field Probe EX3DV4     | 3903               | 03/24/2021  | Annual         | 03/24/2022 |
| SPEAG         | E-Field Probe ES3DV3     | 3972               | 05/21/2021  | Annual         | 05/21/2022 |
| SPEAG         | E-Field Probe ES3DV3     | 3076               | 07/28/2021  | Annual         | 07/28/2022 |
| SPEAG         | E-Field Probe EX3DV4     | 7679               | 09/10/2021  | Annual         | 09/10/2022 |
| SPEAG         | E-Field Probe EX3DV4     | 7370               | 08/26/2021  | Annual         | 08/26/2022 |
| SPEAG         | Dipole D750V3            | 1014               | 06/01/2021  | Annual         | 06/01/2022 |
| SPEAG         | Dipole D835V2            | 4d165              | 08/03/2021  | Annual         | 08/03/2022 |
| SPEAG         | Dipole D1800V2           | 2d015              | 07/30/2021  | Annual         | 07/30/2022 |
| SPEAG         | Dipole D1900V2           | 5d032              | 01/28/2021  | Annual         | 01/28/2022 |
| SPEAG         | Dipole D2450V2           | 965                | 06/15/2021  | Annual         | 06/15/2022 |
| SPEAG         | Dipole D2600V2           | 1106               | 07/30/2021  | Annual         | 07/30/2022 |
| SPEAG         | Dipole D5GHzV2           | 1107               | 07/22/2021  | Annual         | 07/22/2022 |
| Agilent       | Power Meter E4419B       | MY41291386         | 10/23/2020  | Annual         | 10/23/2021 |
| Agilent       | Power Meter E4419B       | MY41291386         | 10/06/2021  | Annual         | 10/06/2022 |
| Agilent       | Power Meter N1911A       | MY45101406         | 07/08/2021  | Annual         | 07/08/2022 |
| Agilent       | Power Sensor 8481A       | SG1091286          | 10/05/2020  | Annual         | 10/05/2021 |
| Agilent       | Power Sensor 8481A       | SG1091286          | 10/06/2021  | Annual         | 10/06/2022 |
| Agilent       | Power Sensor 8481A       | MY41090675         | 10/05/2020  | Annual         | 10/05/2021 |
| Agilent       | Power Sensor 8481A       | MY41090675         | 10/06/2021  | Annual         | 10/06/2022 |
| Agilent       | Power Sensor N1921A      | MY55220026         | 08/05/2021  | Annual         | 08/05/2022 |
| SPEAG         | DAKS 3.5                 | 1038               | 03/17/2021  | Annual         | 03/17/2022 |
| ROHDE&SCHWARZ | Signal Generator SMB100A | 177633             | 07/05/2021  | Annual         | 07/05/2022 |

| Manufacturer  | Type / Model                           | S/N         | Calib. Date | Calib.Interval | Calib.Due  |
|---------------|----------------------------------------|-------------|-------------|----------------|------------|
| H.P           | Network Analyzer /8753ES               | JP39240221  | 01/11/2021  | Annual         | 01/11/2022 |
| Agilent       | WIRELESS COMMUNICATION E5515C          | GB44051865  | 05/28/2021  | Annual         | 05/28/2022 |
| Agilent       | WIRELESS COMMUNICATION E5515C          | MY48360252  | 07/23/2021  | Annual         | 07/23/2022 |
| R&S           | Wireless Communication Test Set CMW500 | 115733      | 04/15/2021  | Annual         | 04/15/2022 |
| Agilent       | Signal Generator N5182A                | MY47070230  | 01/26/2021  | Annual         | 01/26/2022 |
| Agilent       | 11636B/Power Divider                   | 58698       | 02/26/2021  | Annual         | 02/26/2022 |
| EMPOWER       | RF Power Amplifier                     | 1084        | 06/25/2021  | Annual         | 06/25/2022 |
| EMPOWER       | RF Power Amplifier                     | 1041D/C0508 | 06/24/2021  | Annual         | 06/24/2022 |
| MICRO LAB     | LP Filter / LA-15N                     | 10453       | 10/05/2020  | Annual         | 10/05/2021 |
| MICRO LAB     | LP Filter / LA-15N                     | 10453       | 10/06/2021  | Annual         | 10/06/2022 |
| MICRO LAB     | LP Filter / LA-30N                     | -           | 10/05/2020  | Annual         | 10/05/2021 |
| MICRO LAB     | LP Filter / LA-30N                     | -           | 10/06/2021  | Annual         | 10/06/2022 |
| MICRO LAB     | LP Filter / LA-60N                     | 32011       | 10/05/2020  | Annual         | 10/05/2021 |
| MICRO LAB     | LP Filter / LA-60N                     | 32011       | 10/06/2021  | Annual         | 10/06/2022 |
| HP            | Attenuator (3dB) 333340A               | 02427       | 09/06/2021  | Annual         | 09/06/2022 |
| HP            | Attenuator (20dB) 8493C                | 09271       | 09/06/2021  | Annual         | 09/17/2022 |
| Agilent       | Directional Bridge 86205A              | 3140A03878  | 05/28/2021  | Annual         | 05/28/2022 |
| Agilent       | MXA Signal Analyzer N9020A             | MY50510407  | 10/23/2020  | Annual         | 10/23/2021 |
| Agilent       | MXA Signal Analyzer N9020A             | MY50510407  | 10/22/2021  | Annual         | 10/22/2022 |
| HP            | Dual Directional Coupler               | 16072       | 10/05/2020  | Annual         | 10/05/2021 |
| HP            | Dual Directional Coupler               | 16072       | 10/05/2021  | Annual         | 10/05/2022 |
| Anritsu       | Radio Communication Tester MT8820C     | 6201074225  | 02/26/2021  | Annual         | 02/26/2022 |
| Anritsu       | Radio Communication Tester MT8820C     | 6200695605  | 04/15/2021  | Annual         | 04/15/2022 |
| Anritsu       | Radio Communication Tester MT8821C     | 6201502997  | 07/08/2021  | Annual         | 07/08/2022 |
| Anritsu       | Radio Communication Tester MT8821C     | 6262044720  | 12/22/2020  | Annual         | 12/22/2021 |
| ROHDE&SCHWARZ | BLUETOOTH TESTER CBT                   | 100272      | 02/26/2021  | Annual         | 02/26/2022 |

\* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

## 19. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

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## Appendix A. DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information & setup photo file no. as follows:

| Report No.             |
|------------------------|
| HCT-SR-2110-FC012-P-R1 |