

# FCC SAR Test Report

## FCC ID: R9C-CPH2185

**Project No.** : 2008C120  
**Equipment** : Mobile Phone  
**Brand Name** : OPPO  
**Test Model** : CPH2185  
**Series Model** : N/A  
**Date of Receipt** : Aug. 20, 2020  
**Date of Test** : Sep. 02, 2020 ~ Sep. 19, 2020  
**Issued Date** : Sep. 27, 2020  
**Report Version** : R01  
**Test Sample** : Engineering Sample No.: DG2020083157, DG2020083158,  
DG2020083159, DG2020083160  
**Standard(s)** : Please refer to page 2.  
**Applicant** : Guangdong OPPO Mobile Telecommunications Corp., Ltd.  
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**Manufacturer** : Guangdong OPPO Mobile Telecommunications Corp., Ltd.  
**Address** : NO. 18 HaiBin Road, Wusha Village, Chang An Town, DongGuan City,  
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**Factory** : Guangdong OPPO Mobile Telecommunications Corp., Ltd.  
**Address** : NO. 18 HaiBin Road, Wusha Village, Chang An Town, DongGuan City,  
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The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.



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**Standard(s)** : **ANSI Std C95.1-1992** Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz - 300 GHz. (IEEE Std C95.1-1991)

**IEEE Std 1528-2013** Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques

**KDB941225 D01** 3G SAR Procedures v03r01  
**KDB941225 D05** SAR for LTE Devices v02r05  
**KDB941225 D06** Hotspot Mode V02r01  
**KDB447498 D01** General RF Exposure Guidance v06  
**KDB648474 D04** Handset SAR v01r03  
**KDB248227 D01** 802.11 Wi-Fi SAR v02r02  
**KDB865664 D01** SAR measurement 100 MHz to 6 GHz v01r04  
**KDB865664 D02** SAR Reporting v01r02  
**KDB690783 D01** SAR Listings on Grants v01r03

**Declaration**

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

**BTL's** reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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**BTL's** laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

**BTL** is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

**Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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**REPORT ISSUED HISTORY**

| Report Version | Description                | Issued Date   |
|----------------|----------------------------|---------------|
| R00            | Original Issue.            | Sep. 23, 2020 |
| R01            | Added the test data of BT. | Sep. 27, 2020 |

## 1. GENERAL INFORMATION

### 1.1 STATEMENT OF COMPLIANCE

| Mode      | Highest Reported Head SAR-1g (W/kg) | Highest Reported Body-worn (15mm) SAR-1g (W/kg) | Highest Reported Hotspot (10mm) SAR-1g (W/kg) | Highest Reported Product Specific (0mm) SAR-10g (W/kg) | Highest Simultaneous Transmission SAR-1g (W/kg) |
|-----------|-------------------------------------|-------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|-------------------------------------------------|
| GSM850    | 0.48                                | 0.18                                            | 0.29                                          | /                                                      | 1.27                                            |
| GSM1900   | 0.54                                | 0.35                                            | 0.70                                          | /                                                      |                                                 |
| UMTS B2   | 0.66                                | 0.29                                            | 0.63                                          | /                                                      |                                                 |
| UMTS B4   | 0.77                                | 0.34                                            | 0.68                                          | /                                                      |                                                 |
| UMTS B5   | 0.68                                | 0.25                                            | 0.30                                          | /                                                      |                                                 |
| LTE B2    | 0.68                                | 0.32                                            | 0.66                                          | /                                                      |                                                 |
| LTE B4    | 0.60                                | 0.37                                            | 0.80                                          | /                                                      |                                                 |
| LTE B5    | 0.78                                | 0.21                                            | 0.30                                          | /                                                      |                                                 |
| LTE B7    | 1.03                                | 0.32                                            | 0.86                                          | /                                                      |                                                 |
| LTE B12   | 0.13                                | 0.25                                            | 0.24                                          | /                                                      |                                                 |
| LTE B17   | 0.13                                | 0.25                                            | 0.28                                          | /                                                      |                                                 |
| LTE B26   | 0.65                                | 0.26                                            | 0.28                                          | /                                                      |                                                 |
| LTE B38   | 0.80                                | 0.29                                            | 0.70                                          | /                                                      |                                                 |
| LTE B41   | 0.73                                | 0.28                                            | 0.74                                          | /                                                      |                                                 |
| LTE B66   | 0.95                                | 0.30                                            | 0.64                                          | /                                                      |                                                 |
| 2.4G WLAN | 1.22                                | 0.18                                            | 0.28                                          | /                                                      |                                                 |
| 5.2G WLAN | /                                   | /                                               | 0.36                                          | /                                                      |                                                 |
| 5.3G WLAN | 0.84                                | 0.43                                            | /                                             | 2.61                                                   |                                                 |
| 5.6G WLAN | 1.09                                | 0.45                                            | /                                             | 2.64                                                   |                                                 |
| 5.8G WLAN | 0.75                                | 0.35                                            | 0.45                                          | /                                                      |                                                 |
| Bluetooth | 0.30                                | 0.03                                            | /                                             | 0.54                                                   |                                                 |

Note:

1) The device is in compliance with Specific Absorption Rate (SAR) for general population uncontrolled exposure limits according to the FCC rule §2.1093, the ANSI C95.1:1992/IEEE C95.1:1991, the NCRP Report Number 86 for uncontrolled environment and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

### 1.2 LABORATORY ENVIRONMENT

|                                                                                                 |                          |
|-------------------------------------------------------------------------------------------------|--------------------------|
| Temperature                                                                                     | Min. = 18°C, Max. = 25°C |
| Relative humidity                                                                               | Min. = 30%, Max. = 70%   |
| Ground system resistance                                                                        | < 0.5Ω                   |
| Ambient noise is checked and found very low and in compliance with requirement of standards.    |                          |
| Reflection of surrounding objects is minimized and in compliance with requirement of standards. |                          |

### 1.3 GENERAL DESCRIPTION OF EUT

|                              |                                                                                                     |                  |           |
|------------------------------|-----------------------------------------------------------------------------------------------------|------------------|-----------|
| Equipment                    | Mobile Phone                                                                                        |                  |           |
| Brand Name                   | OPPO                                                                                                |                  |           |
| Model Name                   | CPH2185                                                                                             |                  |           |
| IMEI                         | Sample 1                                                                                            | 866261050019836  |           |
|                              | Sample 2                                                                                            | 866261050019810  |           |
|                              | Sample 3                                                                                            | 866261050019794  |           |
|                              | Sample 4                                                                                            | 866261050019778  |           |
| S/N                          | Sample 1                                                                                            | Z9ZSE6VO7DPNLN49 |           |
|                              | Sample 2                                                                                            | PJLRF6DQNN59L7CY |           |
|                              | Sample 3                                                                                            | BIJ7W48P9PI7JRS4 |           |
|                              | Sample 4                                                                                            | CIR46PQ4R4W4GQYT |           |
| Hardware Version             | 11                                                                                                  |                  |           |
| Software Version             | Color OS V7.2                                                                                       |                  |           |
| Modulation                   | GSM(GMSK/8PSK), UMTS(QPSK/16QAM), LTE(QPSK/16QAM/64QAM), WiFi(DSSS/OFDM), BT(GFSK/π/4-DQPSK/8-DPSK) |                  |           |
| Operation Frequency Range(s) | Band                                                                                                | TX (MHz)         | RX (MHz)  |
|                              | GSM850                                                                                              | 824~849          | 869~894   |
|                              | GSM1900                                                                                             | 1850~1910        | 1930~1990 |
|                              | UMTS B2                                                                                             | 1850~1910        | 1930~1990 |
|                              | UMTS B4                                                                                             | 1710~1755        | 2110~2155 |
|                              | UMTS B5                                                                                             | 824~849          | 869~894   |
|                              | LTE B2                                                                                              | 1850~1910        | 1930~1990 |
|                              | LTE B4                                                                                              | 1710~1755        | 2110~2155 |
|                              | LTE B5                                                                                              | 824~849          | 869~894   |
|                              | LTE B7                                                                                              | 2500~2570        | 2620~2690 |
|                              | LTE B12                                                                                             | 699~716          | 729~746   |
|                              | LTE B17                                                                                             | 704~716          | 734~746   |
|                              | LTE B26                                                                                             | 814~849          | 859~894   |
|                              | LTE B66                                                                                             | 1710~1770        | 2110~2170 |
|                              | LTE B38                                                                                             | 2570~2620        |           |
|                              | LTE B41                                                                                             | 2535~2655        |           |
|                              | Bluetooth                                                                                           | 2400~2483.5      |           |
|                              | 2.4G WLAN                                                                                           | 2400~2483.5      |           |
|                              | 5.2G WLAN                                                                                           | 5150~5250        |           |
|                              | 5.3G WLAN                                                                                           | 5250~5350        |           |
|                              | 5.6G WLAN                                                                                           | 5470~5725        |           |
|                              | 5.8G WLAN                                                                                           | 5725~5850        |           |

|                                  |                                                                         |  |             |             |                                         |                         |
|----------------------------------|-------------------------------------------------------------------------|--|-------------|-------------|-----------------------------------------|-------------------------|
| GPRS/EDGE<br>Multislot Class(12) | Max Number of Timeslots in Uplink:                                      |  | 4           |             |                                         |                         |
|                                  | Max Number of Timeslots in Downlink:                                    |  | 4           |             |                                         |                         |
|                                  | Max Total Timeslot:                                                     |  | 5           |             |                                         |                         |
| GSM Device class                 | Class B                                                                 |  |             |             |                                         |                         |
| HSDPA UE Category                | 24                                                                      |  |             |             |                                         |                         |
| HSUPA UE Category                | 7                                                                       |  |             |             |                                         |                         |
| DC-HSDPA Category                | 24                                                                      |  |             |             |                                         |                         |
| HSPA+ Category                   | 7                                                                       |  |             |             |                                         |                         |
| Power Class                      | 4, tested with power level 5(GSM850)                                    |  |             |             |                                         |                         |
|                                  | 1, tested with power level 0(GSM1900)                                   |  |             |             |                                         |                         |
|                                  | 3, tested with power control “all up bits” (UMTS B2/4/5)                |  |             |             |                                         |                         |
|                                  | 3, tested with power control “all Max” (LTE B2/4/5/7/12/17/26/38/41/66) |  |             |             |                                         |                         |
| Test Channels<br>(low-mid-high)  | 128-190-251 (GSM850)                                                    |  |             |             |                                         |                         |
|                                  | 512-661-810 (GSM1900)                                                   |  |             |             |                                         |                         |
|                                  | 9262-9400-9538 (UMTS B2)                                                |  |             |             |                                         |                         |
|                                  | 1312-1413-1513 (UMTS B4)                                                |  |             |             |                                         |                         |
|                                  | 4132-4182-4233 (UMTS B5)                                                |  |             |             |                                         |                         |
|                                  | 18700-18900-19100 (LTE B2 BW=20MHz)                                     |  |             |             |                                         |                         |
|                                  | 20050-20175-20300 (LTE B4 BW=20MHz)                                     |  |             |             |                                         |                         |
|                                  | 20450-20525-20600 (LTE B5 BW=10MHz)                                     |  |             |             |                                         |                         |
|                                  | 20850-21100-21350 (LTE B7 BW=20MHz)                                     |  |             |             |                                         |                         |
|                                  | 23060-23095-23130 (LTE B12 BW=10MHz)                                    |  |             |             |                                         |                         |
|                                  | 23780-23790-23800 (LTE B17 BW=10MHz)                                    |  |             |             |                                         |                         |
|                                  | 26765-26865-26965 (LTE B26 BW=15MHz)                                    |  |             |             |                                         |                         |
|                                  | 37850-38000-38150 (LTE B38 BW=20MHz)                                    |  |             |             |                                         |                         |
|                                  | 40140-40440-40840-41140 (LTE B41 BW=20MHz)                              |  |             |             |                                         |                         |
|                                  | 132072-132272-132472 (LTE B66 BW=20MHz)                                 |  |             |             |                                         |                         |
|                                  | 0-39-78 (BT)                                                            |  |             |             |                                         |                         |
|                                  | 0-19-39 (BLE)                                                           |  |             |             |                                         |                         |
|                                  | 1-6-11 (2.4G WiFi 802.11b/g/n HT20)                                     |  |             |             |                                         |                         |
|                                  | 5G WiFi                                                                 |  | 5.2G        | 5.3G        | 5.6G                                    | 5.8G                    |
|                                  | 802.11a/n HT20/<br>ac VHT20                                             |  | 36-40-44-48 | 52-56-60-64 | 100-104-108-<br>112-116-132-<br>136-140 | 149-153-157-<br>161-165 |
|                                  | 802.11n HT40/<br>ac VHT40                                               |  | 38-46       | 54-62       | 102-110-134                             | 151-159                 |
|                                  | 802.11ac VHT80                                                          |  | 42          | 58          | 106                                     | 155                     |

|                       |                 |                   |                 |                   |
|-----------------------|-----------------|-------------------|-----------------|-------------------|
| Antenna Gain          | Band            | Down Antenna(dBi) | Up Antenna(dBi) | WiFi antenna(dBi) |
|                       | GSM 850         | 0.5               | 0.5             | /                 |
|                       | GSM 1900        | 1.1               | 1.1             | /                 |
|                       | UMTS B2         | 1.1               | 1.1             | /                 |
|                       | UMTS B4         | 1.1               | 1.1             | /                 |
|                       | UMTS B5         | 0.5               | 0.5             | /                 |
|                       | LTE B2          | 1.1               | 1.1             | /                 |
|                       | LTE B4          | 1.1               | 1.1             | /                 |
|                       | LTE B5          | 0.5               | 0.5             | /                 |
|                       | LTE B7          | 1.1               | 1.1             | /                 |
|                       | LTE B12         | 0.5               | 0.5             | /                 |
|                       | LTE B17         | 0.5               | 0.5             | /                 |
|                       | LTE B26         | 0.5               | 0.5             | /                 |
|                       | LTE B38         | 1.1               | 1.1             | /                 |
|                       | LTE B41         | 1.1               | 1.1             | /                 |
|                       | LTE B66         | 1.1               | 1.1             | /                 |
|                       | Bluetooth       | /                 | /               | -3.0              |
|                       | WLAN 2.4G       | /                 | /               | -3.0              |
|                       | WLAN 5G         | /                 | /               | -3.0              |
| Other Information     |                 |                   |                 |                   |
| Battery               | Model Name      | BLP817            |                 |                   |
|                       | Power Rating    | 3.85Vdc, 4100mAh  |                 |                   |
|                       | Factory / Model | 1# Sunwoda        |                 |                   |
|                       |                 | 2# Sunwoda        |                 |                   |
|                       |                 | 3# NVT            |                 |                   |
|                       |                 | 4# TWS            |                 |                   |
| With Earphone(Yes/No) | Yes             |                   |                 |                   |

## 1.4 MAIN TEST INSTRUMENTS

| Item | Equipment                           | Manufacturer  | Model                 | Serial No.         | Cal. Date     | Cal. Interval |
|------|-------------------------------------|---------------|-----------------------|--------------------|---------------|---------------|
| 1    | Data Acquisition Electronics        | Speag         | DAE4                  | 1390               | Oct. 29, 2019 | 1 Year        |
| 2    | Data Acquisition Electronics        | Speag         | DAE3                  | 420                | Jun. 22, 2020 | 1 Year        |
| 3    | E-field Probe                       | Speag         | ES3DV3                | 3162               | May 09, 2020  | 1 Year        |
| 4    | E-field Probe                       | Speag         | EX3DV4                | 7383               | Jan. 03, 2020 | 1 Year        |
| 5    | E-field Probe                       | Speag         | EX3DV4                | 7544               | Sep. 09, 2019 | 1 Year        |
| 6    | System Validation Dipole            | Speag         | D750V3                | 1095               | Jun. 05, 2018 | 3 Years       |
| 7    | System Validation Dipole            | Speag         | D835V2                | 4d160              | Jun. 05, 2018 | 3 Years       |
| 8    | System Validation Dipole            | Speag         | D1750V2               | 1101               | Jun. 07, 2018 | 3 Years       |
| 9    | System Validation Dipole            | Speag         | D1900V2               | 5d179              | Jun. 07, 2018 | 3 Years       |
| 10   | System Validation Dipole            | Speag         | D2450V2               | 919                | Jun. 11, 2018 | 3 Years       |
| 11   | System Validation Dipole            | Speag         | D2600V2               | 1067               | Jun. 11, 2018 | 3 Years       |
| 12   | System Validation Dipole            | Speag         | D5GHzV2               | 1160               | Jun. 20, 2018 | 3 Years       |
| 13   | Twin Sam Phantom                    | Speag         | Twin Sam Phantom V5.0 | 1469               | N/A           | N/A           |
| 14   | Twin Sam Phantom                    | Speag         | Twin Sam Phantom V5.0 | 1784               | N/A           | N/A           |
| 15   | Twin Sam Phantom                    | Speag         | Twin Sam Phantom V5.0 | 1896               | N/A           | N/A           |
| 16   | Radio Communication Analver         | Anritsu       | MT8821C               | 6261915479         | Sep. 29, 2019 | 1 Year        |
| 17   | Radio Communication Analver         | Anritsu       | MT8820C               | 6201525877         | Jul. 25, 2020 | 1 Year        |
| 18   | Wideband Radio Communication Tester | R&S           | CMW500                | 104462             | Jul. 25, 2020 | 1 Year        |
| 19   | Power Amplifier                     | Mini-Circuits | ZHL-42W+              | QA1333003          | Mar. 10, 2020 | 1 Year        |
| 20   | Power Amplifier                     | Mini-Circuits | ZVE-8G+               | 520701341          | Mar. 10, 2020 | 1 Year        |
| 21   | DC Source metter                    | Iteck         | IT6154                | 006104126768201001 | Jul. 25, 2020 | 1 Year        |
| 22   | Signal Analyzer                     | R&S           | FSV7                  | 103120             | Sep. 29, 2019 | 1 Year        |
| 23   | Vector Network Analyzer             | Anritsu       | MS46522B              | 1538101            | Sep. 29, 2019 | 1 Year        |
| 24   | Signal Generator                    | R&S           | SMF100A               | 101214             | Feb. 29, 2020 | 1 Year        |
| 25   | Smart Power Sensor                  | R&S           | NRP-Z21               | 102209             | Mar. 07, 2020 | 1 Year        |
| 26   | Dielectric Assessment Kit           | Speag         | DAK-3.5               | 1226               | N/A           | N/A           |
| 27   | Directional Coupler                 | Woken         | TS-PCC0M-05           | 107090019          | Mar. 01, 2020 | 1 Year        |
| 28   | Coupler                             | Woken         | 0110A05601O-10        | COM5BNW1A2         | Mar. 01, 2020 | 1 Year        |
| 29   | Digital Themometer                  | LKM           | DTM3000               | 3519               | Jul. 02, 2020 | 1 Year        |

## Remark:

1. "N/A" denotes no model name, serial No. or calibration specified.

2.

1) Per KDB865664 D01 requirements for dipole calibration, the test laboratory has adopted three-year extended calibration interval. Each measured dipole is expected to evaluate with the following criteria at least on annual interval in Appendix C.

a) There is no physical damage on the dipole;

b) System check with specific dipole is within 10% of calibrated value;

c) The most recent return-loss result, measured at least annually, deviates by no more than 20% from the previous measurement;

d) The most recent measurement of the real or imaginary parts of the impedance, measured at least annually is within  $5\Omega$  from the previous measurement.

2) Network analyzer probe calibration against air, distilled water and a short block performed before measuring liquid parameters.

## 2. RF EMISSIONS MEASUREMENT

### 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **SAR room** at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

### 2.2 MEASUREMENT UNCERTAINTY

Note: Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is  $< 1.5$  W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

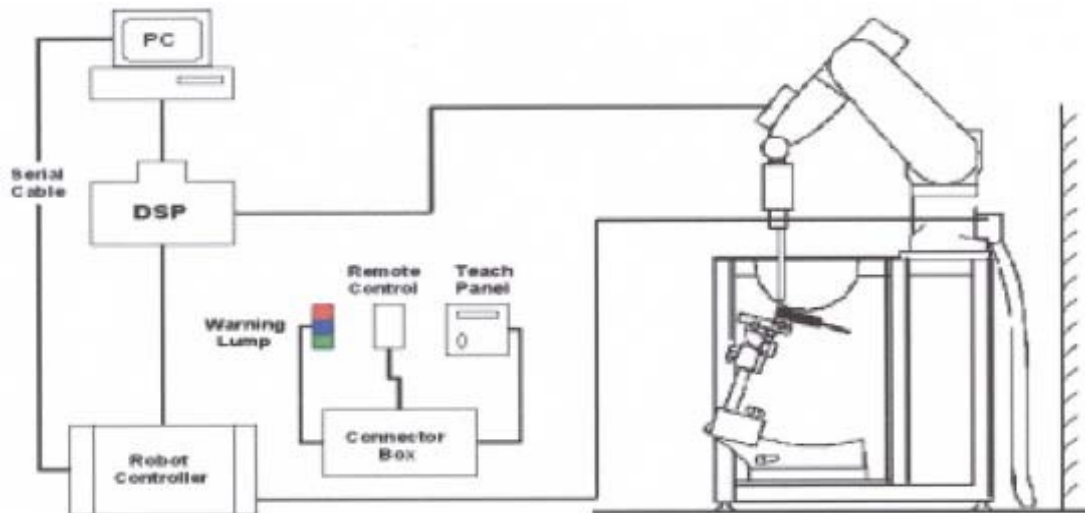
### 3. SAR MEASUREMENTS SYSTEM CONFIGURATION

#### 3.1 SAR MEASUREMENT SET-UP

The DASY5 system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. A unit to operate the optical surface detector which is connected to the EOC.
5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
6. The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 7
7. DASY5 software and SEMCAD data evaluation software.
8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
9. The generic twin phantom enabling the testing of left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. System validation dipoles allowing to validate the proper functioning of the system.

##### 3.1.1 TEST SETUP LAYOUT



## 3.2 DASY5 E-FIELD PROBE SYSTEM

The SAR measurements were conducted with the dosimetric probe EX3DV4 and ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

### 3.2.1 PROBE SPECIFICATION

#### EX3DV4

|               |                                                                                                                                                                           |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction  | Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |
| Calibration   | ISO/IEC 17025 calibration service available                                                                                                                               |
| Frequency     | 10 MHz to 6 GHz<br>Linearity: $\pm 0.2$ dB (30 MHz to 6 GHz)                                                                                                              |
| Directivity   | $\pm 0.3$ dB in HSL (rotation around probe axis)<br>$\pm 0.5$ dB in tissue material (rotation normal to probe axis)                                                       |
| Dynamic Range | 10 $\mu$ W/g to > 100 mW/g<br>Linearity: $\pm 0.2$ dB                                                                                                                     |
| Dimensions    | Overall length: 330 mm (Tip: 20 mm)<br>Tip diameter: 2.5 mm (Body: 12 mm) Distance from probe tip to dipole centers: 1.0 mm                                               |

#### ES3DV3

|               |                                                                                                                                                                           |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction  | Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |
| Calibration   | ISO/IEC 17025 calibration service available                                                                                                                               |
| Frequency     | 10 MHz to 4 GHz<br>Linearity: $\pm 0.2$ dB (30 MHz to 4 GHz)                                                                                                              |
| Directivity   | $\pm 0.3$ dB in HSL (rotation around probe axis)<br>$\pm 0.5$ dB in tissue material (rotation normal to probe axis)                                                       |
| Dynamic Range | 5 $\mu$ W/g to > 100 mW/g<br>Linearity: $\pm 0.2$ dB                                                                                                                      |
| Dimensions    | Overall length: 330 mm (Tip: 20 mm)<br>Tip diameter: 4 mm (Body: 12 mm) Distance from probe tip to dipole centers: 1.0 mm                                                 |



**E-field Probe**

### 3.2.2 E-FIELD PROBE CALIBRATION

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than  $\pm 10\%$ . The spherical isotropy was evaluated and found to be better than  $\pm 0.25\text{dB}$ . The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies below 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$\text{SAR} = C \frac{\Delta T}{\Delta t}$$

Where:  $\Delta t$  = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

$\Delta T$  = Temperature increase due to RF exposure.

Or 
$$\text{SAR} = \frac{|E|^2 \sigma}{\rho}$$

Where:  $\sigma$  = Simulated tissue conductivity,

$\rho$  = Tissue density ( $\text{kg/m}^3$ ).

### 3.2.3 OTHER TEST EQUIPMENT

#### 3.2.3.1. Device Holder for Transmitters

**Construction:** Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices (e.g., laptops, cameras, etc.) It is light weight and fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin SAM, ELI and SAM v6.0 Phantoms.

**Material:** POM, Acrylic glass, Foam

#### 3.2.3.2 Phantom

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Model           | Twin SAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
| Construction    | The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot. |                                                                                    |
| Shell Thickness | $2 \pm 0.2$ mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                    |
| Filling Volume  | Approx. 25 liters                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                    |
| Dimensions      | Length:1000mm; Width: 500mm<br>Height: adjustable feet                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                    |
| Available       | Special                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                    |

### 3.2.4 SCANNING PROCEDURE

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT’s output power and should vary max.  $\pm 5\%$ .

The “surface check” measurement tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above  $\pm 0.1\text{mm}$ ). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within  $\pm 30^\circ$ .)

- Area Scan

The “area scan” measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strength is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The standard scan uses large grid spacing for faster measurement. Standard grid spacing for head measurements is 15 mm in x- and y- dimension ( $\leq 2\text{GHz}$ ), 12 mm in x- and y- dimension (2-4 GHz) and 10mm in x- and y- dimension (4-6GHz). If a finer resolution is needed, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in orientation.

- Zoom Scan

A “zoom scan” measures the field in a volume around the 2D peak SAR value acquired in the previous “coarse” scan. This is a fine grid with maximum scan spatial resolution:  $\Delta x_{\text{zoom}}, \Delta y_{\text{zoom}} \leq 2\text{GHz} \rightarrow \leq 8\text{mm}$ , 2-4GHz  $\rightarrow \leq 5\text{mm}$  and 4-6 GHz  $\rightarrow \leq 4\text{mm}$ ;  $\Delta z_{\text{zoom}} \leq 3\text{GHz} \rightarrow \leq 5\text{mm}$ , 3-4 GHz  $\rightarrow \leq 4\text{mm}$  and 4-6GHz  $\rightarrow \leq 2\text{mm}$  where the robot additionally moves the probe along the z-axis away from the bottom of the Phantom. DASY is also able to perform repeated zoom scans if more than 1 peak is found during area scan. In this document, the evaluated peak 1g and 10g averaged SAR values are shown in the 2D-graphics in Appendix B. Test results relevant for the specified standard (see chapter 1.4.) are shown in table form in chapter 7.2.

A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 2 mm steps. This measurement shows the continuity of the liquid and can - depending in the field strength – also show the liquid depth.

The following table summarizes the area scan and zoom scan resolutions per FCC KDB 865664D01:

| Frequency          | Maximun Area Scan resolution<br>( $\Delta x_{\text{area}}, \Delta y_{\text{area}}$ ) | Maximun Zoom Scan spatial resolution<br>( $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$ ) | Maximun Zoom Scan spatial resolution |                               |                                          | Minimum zoom scan volume<br>(x,y,z) |
|--------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------|------------------------------------------|-------------------------------------|
|                    |                                                                                      |                                                                                              | Uniform Grid                         | Graded Grad                   |                                          |                                     |
|                    |                                                                                      |                                                                                              | $\Delta z_{\text{Zoom}}(n)$          | $\Delta z_{\text{Zoom}}(1)^*$ | $\Delta z_{\text{Zoom}}(n>1)^*$          |                                     |
| $\leq 2\text{GHz}$ | $\leq 15\text{mm}$                                                                   | $\leq 8\text{mm}$                                                                            | $\leq 5\text{mm}$                    | $\leq 4\text{mm}$             | $\leq 1.5^* \Delta z_{\text{Zoom}}(n-1)$ | $\geq 30\text{mm}$                  |
| 2-3GHz             | $\leq 12\text{mm}$                                                                   | $\leq 5\text{mm}$                                                                            | $\leq 5\text{mm}$                    | $\leq 4\text{mm}$             | $\leq 1.5^* \Delta z_{\text{Zoom}}(n-1)$ | $\geq 30\text{mm}$                  |
| 3-4GHz             | $\leq 12\text{mm}$                                                                   | $\leq 5\text{mm}$                                                                            | $\leq 4\text{mm}$                    | $\leq 3\text{mm}$             | $\leq 1.5^* \Delta z_{\text{Zoom}}(n-1)$ | $\geq 28\text{mm}$                  |
| 4-5GHz             | $\leq 10\text{mm}$                                                                   | $\leq 4\text{mm}$                                                                            | $\leq 3\text{mm}$                    | $\leq 2.5\text{mm}$           | $\leq 1.5^* \Delta z_{\text{Zoom}}(n-1)$ | $\geq 25\text{mm}$                  |
| 5-6GHz             | $\leq 10\text{mm}$                                                                   | $\leq 4\text{mm}$                                                                            | $\leq 2\text{mm}$                    | $\leq 2\text{mm}$             | $\leq 1.5^* \Delta z_{\text{Zoom}}(n-1)$ | $\geq 22\text{mm}$                  |

### 3.2.5 SPATIAL PEAK SAR EVALUATION

The spatial peak SAR - value for 1 and 10 g is evaluated after the Cube measurements have been done. The basis of the evaluation are the SAR values measured at the points of the fine cube grid consisting of 5 x 5 x 7 points (with 8mm horizontal resolution) or 7 x 7 x 7 points (with 5mm horizontal resolution) or 8 x 8 x 7 points (with 4mm horizontal resolution). The algorithm that finds the maximal averaged volume is separated into three different stages.

- The data between the dipole center of the probe and the surface of the phantom are extrapolated. This data cannot be measured since the center of the dipole is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is about 1 mm (see probe calibration sheet). The extrapolated data from a cube measurement can be visualized by selecting "Graph Evaluated".
- The maximum interpolated value is searched with a straight-forward algorithm. Around this maximum the SAR - values averaged over the spatial volumes (1g or 10 g) are computed using the 3d-spline interpolation algorithm. If the volume cannot be evaluated (i.e., if a part of the grid was cut off by the boundary of the measurement area) the evaluation will be started on the corners of the bottom plane of the cube.
- All neighboring volumes are evaluated until no neighboring volume with a higher average value is found.

#### Extrapolation

The extrapolation is based on a least square algorithm [W. Gander, Computer mathematic, p.168-180]. Through the points in the first 3 cm along the z-axis, polynomials of order four are calculated. These polynomials are then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from each other.

#### Interpolation

The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the "Not a knot"-condition [W. Gander, Computer mathematic, p.141-150] (x, y and z -direction) [Numerical Recipes in C, Second Edition, p.123ff ].

#### Volume Averaging

At First the size of the cube is calculated. Then the volume is integrated with the trapezoidal algorithm. 8000 points (20x20x20) are interpolated to calculate the average.

#### Advanced Extrapolation

DASY5 uses the advanced extrapolation option which is able to compensate boundary effects on E-field probes.

### **3.2.6 DATA STORAGE AND EVALUATION**

#### **3.2.6.1 Data Storage**

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension "DAE". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm<sup>2</sup>], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

### 3.2.7 DATA EVALUATION BY SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

|                    |                         |                      |
|--------------------|-------------------------|----------------------|
| Probe parameters:  | Sensitivity             | Normi, ai0, ai1, ai2 |
|                    | Conversion factor       | ConvFi               |
|                    | Diode compression point | Dcpj                 |
| Device parameters: | Frequency               | f                    |
|                    | Crest factor            | cf                   |
| Media parameters:  | Conductivity            |                      |
|                    | Density                 |                      |

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multi meter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot cf / dcp_i$$

|      |                                            |                  |
|------|--------------------------------------------|------------------|
| With | $V_i$ = compensated signal of channel i    | ( i = x, y, z )  |
|      | $U_i$ = input signal of channel i          | ( i = x, y, z )  |
|      | cf = crest factor of exciting field        | (DASY parameter) |
|      | dcp <sub>i</sub> = diode compression point | (DASY parameter) |

From the compensated input signals the primary field data for each channel can be evaluated:

$$\text{E-field probes: } E_i = (V_i / \text{Norm}_i \cdot \text{ConvF})^{1/2}$$

$$\text{H-field probes: } H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$$

With  $V_i$  = compensated signal of channel  $i$  ( $i = x, y, z$ )

$\text{Norm}_i$  = sensor sensitivity of channel  $i$  ( $i = x, y, z$ )  
[mV/(V/m)<sup>2</sup>] for E-field Probes

ConvF = sensitivity enhancement in solution

$a_{ij}$  = sensor sensitivity factors for H-field probes

$f$  = carrier frequency [GHz]

$E_i$  = electric field strength of channel  $i$  in V/m

$H_i$  = magnetic field strength of channel  $i$  in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{\text{tot}} = (E_x^2 + E_y^2 + E_z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$\text{SAR} = (E_{\text{tot}})^2 \cdot \sigma / (\rho \cdot 1000)$$

With SAR = local specific absorption rate in mW/g

$E_{\text{tot}}$  = total field strength in V/m  
= conductivity in [mho/m] or [Siemens/m]  
= equivalent tissue density in g/cm<sup>3</sup>

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{\text{pwe}} = E_{\text{tot}}^2 / 3770 \text{ or } P_{\text{pwe}} = H_{\text{tot}}^2 \cdot 37.7$$

With  $P_{\text{pwe}}$  = equivalent power density of a plane wave in mW/cm<sup>2</sup>

$E_{\text{tot}}$  = total field strength in V/m

$H_{\text{tot}}$  = total magnetic field strength in A/m

## 4. SYSTEM VERIFICATION PROCEDURE

### 4.1 TISSUE VERIFICATION

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within  $\pm 5\%$  of the target values.

The following materials are used for producing the tissue-equivalent materials.

| Tissue Type | Bactericide | DGBE | HEC | NaCl | Sucrose | Triton X-100 | Water | Diethylene Glycol Mono-hexylether |
|-------------|-------------|------|-----|------|---------|--------------|-------|-----------------------------------|
| Head 750    | 0.2         | -    | 0.2 | 1.5  | 56.0    | -            | 42.1  | -                                 |
| Head 835    | 0.2         | -    | 0.2 | 1.5  | 57.0    | -            | 41.1  | -                                 |
| Head 1750   | -           | 47.0 | -   | 0.4  | -       | -            | 52.6  | -                                 |
| Head 1900   | -           | 44.5 | -   | 0.2  | -       | -            | 55.3  | -                                 |
| Head 2450   | -           | 45.0 | -   | 0.1  | -       | -            | 54.9  | -                                 |
| Head 2600   | -           | 45.1 | -   | 0.1  | -       | -            | 54.8  | -                                 |
| Head 5G     | -           | -    | -   | -    | -       | 17.2         | 65.5  | 17.3                              |

Salt: 99+% Pure Sodium Chloride; Sugar: 98+% Pure Sucrose; Water: De-ionized, 16M + resistivity  
 HEC: Hydroxyethyl Cellulose; DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]  
 Triton X-100(ultra pure): Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl)phenyl]ether

| Tissue Verification |                 |                   |                           |                               |                                    |                                        |                                         |                                             |               |
|---------------------|-----------------|-------------------|---------------------------|-------------------------------|------------------------------------|----------------------------------------|-----------------------------------------|---------------------------------------------|---------------|
| Tissue Type         | Frequency (MHz) | Liquid Temp. (°C) | Conductivity ( $\sigma$ ) | Permittivity ( $\epsilon_r$ ) | Targeted Conductivity ( $\sigma$ ) | Targeted Permittivity ( $\epsilon_r$ ) | Deviation Conductivity ( $\sigma$ ) (%) | Deviation Permittivity ( $\epsilon_r$ ) (%) | Date          |
| Head                | 750             | 22.5              | 0.883                     | 40.275                        | 0.89                               | 41.9                                   | -0.79                                   | -3.88                                       | Sep. 13, 2020 |
| Head                | 750             | 22.3              | 0.881                     | 40.295                        | 0.89                               | 41.9                                   | -1.01                                   | -3.83                                       | Sep. 14, 2020 |
| Head                | 750             | 22.3              | 0.881                     | 40.295                        | 0.89                               | 41.9                                   | -1.01                                   | -3.83                                       | Sep. 14, 2020 |
| Head                | 835             | 22.4              | 0.884                     | 43.340                        | 0.90                               | 41.5                                   | -1.78                                   | 4.43                                        | Sep. 03, 2020 |
| Head                | 835             | 22.5              | 0.884                     | 43.341                        | 0.90                               | 41.5                                   | -1.78                                   | 4.44                                        | Sep. 04, 2020 |
| Head                | 835             | 22.3              | 0.884                     | 43.347                        | 0.90                               | 41.5                                   | -1.78                                   | 4.45                                        | Sep. 05, 2020 |
| Head                | 1750            | 22.1              | 1.324                     | 41.053                        | 1.37                               | 40.1                                   | -3.36                                   | 2.38                                        | Sep. 02, 2020 |
| Head                | 1750            | 22.0              | 1.324                     | 41.008                        | 1.37                               | 40.1                                   | -3.36                                   | 2.26                                        | Sep. 09, 2020 |
| Head                | 1750            | 22.3              | 1.324                     | 41.075                        | 1.37                               | 40.1                                   | -3.36                                   | 2.43                                        | Sep. 11, 2020 |
| Head                | 1750            | 22.4              | 1.324                     | 41.060                        | 1.37                               | 40.1                                   | -3.36                                   | 2.39                                        | Sep. 12, 2020 |
| Head                | 1900            | 22.1              | 1.459                     | 40.562                        | 1.40                               | 40.0                                   | 4.21                                    | 1.40                                        | Sep. 02, 2020 |
| Head                | 1900            | 22.2              | 1.459                     | 40.572                        | 1.40                               | 40.0                                   | 4.21                                    | 1.43                                        | Sep. 02, 2020 |
| Head                | 1900            | 22.4              | 1.459                     | 40.498                        | 1.40                               | 40.0                                   | 4.21                                    | 1.24                                        | Sep. 10, 2020 |
| Head                | 1900            | 22.3              | 1.460                     | 40.584                        | 1.40                               | 40.0                                   | 4.29                                    | 1.46                                        | Sep. 11, 2020 |
| Head                | 2450            | 22.1              | 1.757                     | 38.570                        | 1.80                               | 39.2                                   | -2.39                                   | -1.61                                       | Sep. 12, 2020 |
| Head                | 2450            | 22.2              | 1.757                     | 38.587                        | 1.80                               | 39.2                                   | -2.39                                   | -1.56                                       | Sep. 18, 2020 |
| Head                | 2450            | 22.3              | 1.874                     | 38.295                        | 1.80                               | 39.2                                   | 4.11                                    | -2.31                                       | Sep. 19, 2020 |
| Head                | 2600            | 22.2              | 1.916                     | 38.014                        | 1.96                               | 39.0                                   | -2.24                                   | -2.53                                       | Sep. 06, 2020 |
| Head                | 2600            | 22.2              | 1.916                     | 38.014                        | 1.96                               | 39.0                                   | -2.24                                   | -2.53                                       | Sep. 06, 2020 |
| Head                | 2600            | 22.1              | 1.904                     | 37.980                        | 1.96                               | 39.0                                   | -2.86                                   | -2.62                                       | Sep. 07, 2020 |
| Head                | 2600            | 22.2              | 1.908                     | 37.962                        | 1.96                               | 39.0                                   | -2.65                                   | -2.66                                       | Sep. 08, 2020 |
| Head                | 5200            | 22.3              | 4.518                     | 36.372                        | 4.66                               | 36.0                                   | -3.05                                   | 1.03                                        | Sep. 16, 2020 |
| Head                | 5300            | 22.5              | 4.717                     | 36.648                        | 4.76                               | 35.9                                   | -0.90                                   | 2.08                                        | Sep. 05, 2020 |
| Head                | 5300            | 22.4              | 4.674                     | 36.273                        | 4.76                               | 35.9                                   | -1.81                                   | 1.04                                        | Sep. 12, 2020 |
| Head                | 5300            | 22.5              | 4.674                     | 36.277                        | 4.76                               | 35.9                                   | -1.81                                   | 1.05                                        | Sep. 13, 2020 |
| Head                | 5300            | 22.3              | 4.673                     | 36.282                        | 4.76                               | 35.9                                   | -1.83                                   | 1.06                                        | Sep. 16, 2020 |
| Head                | 5500            | 22.5              | 4.873                     | 36.095                        | 4.96                               | 35.6                                   | -1.75                                   | 1.39                                        | Sep. 05, 2020 |
| Head                | 5500            | 22.4              | 4.826                     | 35.740                        | 4.96                               | 35.6                                   | -2.70                                   | 0.39                                        | Sep. 12, 2020 |
| Head                | 5500            | 22.5              | 4.827                     | 35.745                        | 4.96                               | 35.6                                   | -2.68                                   | 0.41                                        | Sep. 13, 2020 |
| Head                | 5500            | 22.3              | 4.826                     | 35.750                        | 4.96                               | 35.6                                   | -2.70                                   | 0.42                                        | Sep. 16, 2020 |
| Head                | 5800            | 22.5              | 5.175                     | 35.783                        | 5.27                               | 35.3                                   | -1.80                                   | 1.37                                        | Sep. 05, 2020 |
| Head                | 5800            | 22.4              | 5.123                     | 35.423                        | 5.27                               | 35.3                                   | -2.79                                   | 0.35                                        | Sep. 12, 2020 |
| Head                | 5800            | 22.5              | 5.124                     | 35.430                        | 5.27                               | 35.3                                   | -2.77                                   | 0.37                                        | Sep. 13, 2020 |

Note:

- 1) The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.
- 2) KDB 865664 was ensured to be applied for probe calibration frequencies greater than or equal to 50MHz of the EUT frequencies.
- 3) The above measured tissue parameters were used in the DASY software to perform interpolation via the DASY software to determine actual dielectric parameters at the test frequencies. The SAR test plots may slightly differ from the table above since the DASY rounds to three significant digits.

## 4.2 SYSTEM CHECK

The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system check is performed with tissue equivalent material according to IEEE Std 1528 (described above). The following table shows system check results for all frequency bands and tissue liquids used during the tests.

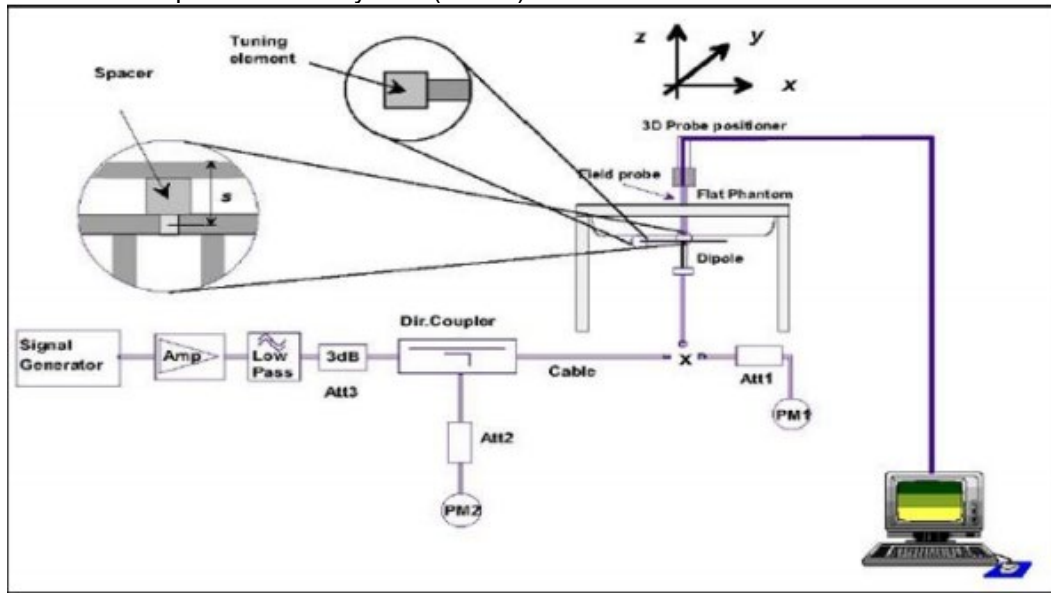
| System Check | Date          | Frequency (MHz) | Targeted SAR-1g (W/kg) | Measured SAR-1g (W/kg) | normalized SAR-1g (W/kg) | Deviation (%) | Dipole S/N |
|--------------|---------------|-----------------|------------------------|------------------------|--------------------------|---------------|------------|
| Head         | Sep. 13, 2020 | 750             | 8.47                   | 2.13                   | 8.52                     | 0.59          | 1095       |
| Head         | Sep. 14, 2020 | 750             | 8.47                   | 2.07                   | 8.28                     | -2.24         | 1095       |
| Head         | Sep. 14, 2020 | 750             | 8.47                   | 2.12                   | 8.48                     | 0.12          | 1095       |
| Head         | Sep. 03, 2020 | 835             | 9.23                   | 2.32                   | 9.28                     | 0.54          | 4d160      |
| Head         | Sep. 04, 2020 | 835             | 9.23                   | 2.42                   | 9.68                     | 4.88          | 4d160      |
| Head         | Sep. 05, 2020 | 835             | 9.23                   | 2.37                   | 9.48                     | 2.71          | 4d160      |
| Head         | Sep. 02, 2020 | 1750            | 37.00                  | 9.16                   | 36.64                    | -0.97         | 1101       |
| Head         | Sep. 09, 2020 | 1750            | 37.00                  | 9.10                   | 36.40                    | -1.62         | 1101       |
| Head         | Sep. 11, 2020 | 1750            | 37.00                  | 9.30                   | 37.20                    | 0.54          | 1101       |
| Head         | Sep. 12, 2020 | 1750            | 37.00                  | 9.00                   | 36.00                    | -2.70         | 1101       |
| Head         | Sep. 02, 2020 | 1900            | 39.50                  | 10.10                  | 40.40                    | 2.28          | 5d179      |
| Head         | Sep. 02, 2020 | 1900            | 39.50                  | 10.16                  | 40.64                    | 2.89          | 5d179      |
| Head         | Sep. 10, 2020 | 1900            | 39.50                  | 10.14                  | 40.56                    | 2.68          | 5d179      |
| Head         | Sep. 11, 2020 | 1900            | 39.50                  | 10.20                  | 40.80                    | 3.29          | 5d179      |
| Head         | Sep. 12, 2020 | 2450            | 52.10                  | 12.40                  | 49.60                    | -4.80         | 919        |
| Head         | Sep. 18, 2020 | 2450            | 52.10                  | 13.60                  | 54.40                    | 4.41          | 919        |
| Head         | Sep. 19, 2020 | 2450            | 52.10                  | 12.80                  | 51.20                    | -1.73         | 919        |
| Head         | Sep. 06, 2020 | 2600            | 56.10                  | 13.76                  | 55.04                    | -1.89         | 1067       |
| Head         | Sep. 06, 2020 | 2600            | 56.10                  | 13.70                  | 54.80                    | -2.32         | 1067       |
| Head         | Sep. 07, 2020 | 2600            | 56.10                  | 13.81                  | 55.24                    | -1.53         | 1067       |
| Head         | Sep. 08, 2020 | 2600            | 56.10                  | 14.10                  | 56.40                    | 0.53          | 1067       |
| Head         | Sep. 16, 2020 | 5200            | 75.30                  | 7.50                   | 75.00                    | -0.40         | 1160       |
| Head         | Sep. 05, 2020 | 5300            | 76.80                  | 7.84                   | 78.40                    | 2.08          | 1160       |
| Head         | Sep. 12, 2020 | 5300            | 76.80                  | 7.30                   | 73.00                    | -4.95         | 1160       |
| Head         | Sep. 13, 2020 | 5300            | 76.80                  | 7.32                   | 73.20                    | -4.69         | 1160       |
| Head         | Sep. 16, 2020 | 5300            | 76.80                  | 7.62                   | 76.20                    | -0.78         | 1160       |
| Head         | Sep. 05, 2020 | 5500            | 80.80                  | 8.02                   | 80.20                    | -0.74         | 1160       |
| Head         | Sep. 12, 2020 | 5500            | 80.80                  | 7.93                   | 79.30                    | -1.86         | 1160       |
| Head         | Sep. 13, 2020 | 5500            | 80.80                  | 8.07                   | 80.70                    | -0.12         | 1160       |
| Head         | Sep. 16, 2020 | 5500            | 80.80                  | 8.04                   | 80.40                    | -0.50         | 1160       |
| Head         | Sep. 05, 2020 | 5800            | 77.90                  | 7.62                   | 76.20                    | -2.18         | 1160       |
| Head         | Sep. 12, 2020 | 5800            | 77.90                  | 7.41                   | 74.10                    | -4.88         | 1160       |
| Head         | Sep. 13, 2020 | 5800            | 77.90                  | 7.56                   | 75.60                    | -2.95         | 1160       |

### 4.3 SYSTEM CHECK PROCEDURE

The system check is performed by using a system check dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a plexiglass spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 250mW (below 3GHz) or 100mW (3-6GHz). To adjust this power a power meter is used.

The power sensor is connected to the cable before the system check to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the system check to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test.

System check results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system ( $\pm 10\%$ ).



## 5. SAR MEASUREMENT VARIABILITY AND UNCERTAINTY

### 5.1 SAR MEASUREMENT VARIABILITY

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The 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.

- 1) Repeated measurement is not required when the original highest measured SAR is  $< 0.80$  W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is  $\geq 0.80$  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 ( $\sim 10\%$  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 and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

The detailed repeated measurement results are shown in Section 7.2.

## 6. OPERATIONAL CONDITIONS DURING TEST

### 6.1 SAR TEST CONFIGURATION

#### 6.1.1 GSM TEST CONFIGURATION

SAR tests for GSM850 and GSM1900, a communication link is set up with a base station by air link. Using 8960 Series the power lever is set to “5” and “0” in SAR of GSM850 and GSM1900. The tests in the band of GSM850 and GSM1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 12 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8PSK.

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot.

The allowed power reduction in the multi-slot configuration is as following:

| Number of timeslots in uplink assignment |            | Reduction of maximum output power (dB) |              |              |
|------------------------------------------|------------|----------------------------------------|--------------|--------------|
| Band                                     | Time Slots | GPRS (GMSK)                            | EGPRS (GMSK) | EGPRS (8PSK) |
| GSM850                                   | 1 TX slot  | 0.0                                    | 0.0          | 6.4          |
|                                          | 2 TX slots | 3.0                                    | 3.0          | 9.4          |
|                                          | 3 TX slots | 4.8                                    | 4.8          | 11.2         |
|                                          | 4 TX slots | 6.0                                    | 6.0          | 12.4         |
| GSM1900                                  | 1 TX slot  | 0.0                                    | 0.0          | 4.3          |
|                                          | 2 TX slots | 3.0                                    | 3.0          | 7.3          |
|                                          | 3 TX slots | 4.8                                    | 4.8          | 9.1          |
|                                          | 4 TX slots | 6.0                                    | 6.0          | 10.3         |

## 6.1.2 UMTS TEST CONFIGURATION

### 1. Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the procedures description in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all "1s" for WCDMA/HSDPA or by applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Result for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) should be tabulated in the SAR report. All configuration that are not supported by the DUT or cannot be measured due to technical or equipment limitation should be clearly identified.

### 2. WCDMA

#### (1) Head SAR Measurements

SAR for next to ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1s". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR with 3.4kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

#### (2) Body SAR Measurements

SAR for body-worn accessory is measured using the 12.2 kbps RMC with the TPC bits configured to all "1s". The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by handset with 12.2 kbps RMC as the primary mode.

### 3. HSDPA

SAR for body exposure configurations is measured according to the "Body SAR Measurements" procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$ W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as "otherwise" in the applicable procedures; SAR measurement is required for the secondary mode.

Per KDB941225 D01, the 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures for the highest reported SAR body exposure configuration in 12.2 kbps RMC.

HSDPA should be configured according to UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HAPRQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. The  $\beta_c$  and  $\beta_d$  gain factors for DPCCH and DPDCH were set according to the values in the below table,  $\beta_{hs}$  for HS-DPCCH is set automatically to the correct value when  $\Delta ACK$ ,  $\Delta NACK$ ,  $\Delta CQI = 8$ . The variation of the  $\beta_c / \beta_d$  ratio causes a power reduction at sub-tests 2 - 4.

| Sub-test <sup>o</sup>                                                                                                                                                                                                                                                                     | $\beta_c$ <sup>o</sup> | $\beta_d$ <sup>o</sup> | $\beta_d$ (SF) <sup>o</sup> | $\beta_c / \beta_d$ <sup>o</sup> | $\beta_{hs}$ (1) <sup>o</sup> | CM(dB)(2) <sup>o</sup> | MPR (dB) <sup>o</sup> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|-----------------------------|----------------------------------|-------------------------------|------------------------|-----------------------|
| 1 <sup>o</sup>                                                                                                                                                                                                                                                                            | 2/15 <sup>o</sup>      | 15/15 <sup>o</sup>     | 64 <sup>o</sup>             | 2/15 <sup>o</sup>                | 4/15 <sup>o</sup>             | 0.0 <sup>o</sup>       | 0 <sup>o</sup>        |
| 2 <sup>o</sup>                                                                                                                                                                                                                                                                            | 12/15(3) <sup>o</sup>  | 15/15(3) <sup>o</sup>  | 64 <sup>o</sup>             | 12/15(3) <sup>o</sup>            | 24/15 <sup>o</sup>            | 1.0 <sup>o</sup>       | 0 <sup>o</sup>        |
| 3 <sup>o</sup>                                                                                                                                                                                                                                                                            | 15/15 <sup>o</sup>     | 8/15 <sup>o</sup>      | 64 <sup>o</sup>             | 15/8 <sup>o</sup>                | 30/15 <sup>o</sup>            | 1.5 <sup>o</sup>       | 0.5 <sup>o</sup>      |
| 4 <sup>o</sup>                                                                                                                                                                                                                                                                            | 15/15 <sup>o</sup>     | 4/15 <sup>o</sup>      | 64 <sup>o</sup>             | 15/4 <sup>o</sup>                | 30/15 <sup>o</sup>            | 1.5 <sup>o</sup>       | 0.5 <sup>o</sup>      |
| Note 1: $\Delta ACK$ , $\Delta NACK$ and $\Delta CQI = 8$ $A_{hs} = \beta_{hs} / \beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$ <sup>o</sup>                                                                                                                                             |                        |                        |                             |                                  |                               |                        |                       |
| Note 2 : CM=1 for $\beta_c / \beta_d = 12/15$ , $\beta_{hs} / \beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases. <sup>o</sup> |                        |                        |                             |                                  |                               |                        |                       |
| Note 3 : For subtest 2 the $\beta_c / \beta_d$ ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$ <sup>o</sup>                             |                        |                        |                             |                                  |                               |                        |                       |

The measurements were performed with a Fixed Reference Channel (FRC) and H-Set 1 QPSK.

Settings of required H-Set 1 QPSK acc. to 3GPP 34.121

| Parameter                        | Value       |
|----------------------------------|-------------|
| Nominal average inf. bit rate    | 534 kbit/s  |
| Inter-TTI Distance               | 3 TTI"s     |
| Number of HARQ Processes         | 2 Processes |
| Information Bit Payload          | 3202 Bits   |
| MAC-d PDU size                   | 336 Bits    |
| Number Code Blocks               | 1 Block     |
| Binary Channel Bits Per TTI      | 4800 Bits   |
| Total Available SMLs in UE       | 19200 SMLs  |
| Number of SMLs per HARQ Process  | 9600 SMLs   |
| Coding Rate                      | 0.67        |
| Number of Physical Channel Codes | 5           |

HSDPA UE category

| HS-DSCH Category | Maximum HS-DSCH Codes Received | Minimum Inter-TTI Interval | Maximum HS-DSCH Transport Block Bits/HS-DSCH TTI | Total Soft Channel Bits |
|------------------|--------------------------------|----------------------------|--------------------------------------------------|-------------------------|
| 1                | 5                              | 3                          | 7298                                             | 19200                   |
| 2                | 5                              | 3                          | 7298                                             | 28800                   |
| 3                | 5                              | 2                          | 7298                                             | 28800                   |
| 4                | 5                              | 2                          | 7298                                             | 38400                   |
| 5                | 5                              | 1                          | 7298                                             | 57600                   |
| 6                | 5                              | 1                          | 7298                                             | 67200                   |
| 7                | 10                             | 1                          | 14411                                            | 115200                  |
| 8                | 10                             | 1                          | 14411                                            | 134400                  |
| 9                | 15                             | 1                          | 25251                                            | 172800                  |
| 10               | 15                             | 1                          | 27952                                            | 172800                  |
| 11               | 5                              | 2                          | 3630                                             | 14400                   |
| 12               | 5                              | 1                          | 3630                                             | 28800                   |
| 13               | 15                             | 1                          | 34800                                            | 259200                  |
| 14               | 15                             | 1                          | 42196                                            | 259200                  |
| 15               | 15                             | 1                          | 23370                                            | 345600                  |
| 16               | 15                             | 1                          | 27952                                            | 345600                  |

#### 4. HSUPA

SAR for Body exposure configurations is measured according to the “Body SAR Measurements” procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq 1/4$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2W/kg$ , SAR measurement is not required for the secondary mode.

Per KDB941225 D01, the 3G SAR test reduction procedures is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures for the highest reported body exposure SAR configuration in 12.2 kbps RMC.

Due to inner loop power control requirements in HSUPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSDPA should be configured according to the values indicated below as well as other applicable procedures described in the “WCDMA Handset” and “Release 5 HSDPA Data Device” sections of 3G device.

##### Subtests for WCDMA Release 6 HSUPA

| Sub-test <sup>1</sup> | $\beta_c$ <sup>2</sup> | $\beta_d$ <sup>2</sup> | $\beta_d$ (SF) <sup>2</sup> | $\beta_c/\beta_d$ <sup>2</sup> | $\beta_{hs}$ <sup>(1)</sup> | $\beta_{ec}$ <sup>2</sup> | $\beta_{ed}$ <sup>2</sup>                  | $\beta_{ec}$ (SF) <sup>2</sup> | $\beta_{ed}$ (code) <sup>2</sup> | CM <sup>(2)</sup> <sup>2</sup> (dB) <sup>2</sup> | MP R <sup>2</sup> (dB) <sup>2</sup> | AG <sup>(4)</sup> Index <sup>2</sup> | E-TFC I <sup>2</sup> |
|-----------------------|------------------------|------------------------|-----------------------------|--------------------------------|-----------------------------|---------------------------|--------------------------------------------|--------------------------------|----------------------------------|--------------------------------------------------|-------------------------------------|--------------------------------------|----------------------|
| 1 <sup>2</sup>        | 11/15 <sup>(3)</sup>   | 15/15 <sup>(3)</sup>   | 64 <sup>2</sup>             | 11/15 <sup>(3)</sup>           | 22/15 <sup>2</sup>          | 209/225 <sup>2</sup>      | 1039/225 <sup>2</sup>                      | 4 <sup>2</sup>                 | 1 <sup>2</sup>                   | 1.0 <sup>2</sup>                                 | 0.0 <sup>2</sup>                    | 20 <sup>2</sup>                      | 75 <sup>2</sup>      |
| 2 <sup>2</sup>        | 6/15 <sup>2</sup>      | 15/15 <sup>2</sup>     | 64 <sup>2</sup>             | 6/15 <sup>2</sup>              | 12/15 <sup>2</sup>          | 12/15 <sup>2</sup>        | 94/75 <sup>2</sup>                         | 4 <sup>2</sup>                 | 1 <sup>2</sup>                   | 3.0 <sup>2</sup>                                 | 2.0 <sup>2</sup>                    | 12 <sup>2</sup>                      | 67 <sup>2</sup>      |
| 3 <sup>2</sup>        | 15/15 <sup>2</sup>     | 9/15 <sup>2</sup>      | 64 <sup>2</sup>             | 15/9 <sup>2</sup>              | 30/15 <sup>2</sup>          | 30/15 <sup>2</sup>        | $\beta_{ed1}:47/15$<br>$\beta_{ed2}:47/15$ | 4 <sup>2</sup>                 | 2 <sup>2</sup>                   | 2.0 <sup>2</sup>                                 | 1.0 <sup>2</sup>                    | 15 <sup>2</sup>                      | 92 <sup>2</sup>      |
| 4 <sup>2</sup>        | 2/15 <sup>2</sup>      | 15/15 <sup>2</sup>     | 64 <sup>2</sup>             | 2/15 <sup>2</sup>              | 4/15 <sup>2</sup>           | 2/15 <sup>2</sup>         | 56/75 <sup>2</sup>                         | 4 <sup>2</sup>                 | 1 <sup>2</sup>                   | 3.0 <sup>2</sup>                                 | 2.0 <sup>2</sup>                    | 17 <sup>2</sup>                      | 71 <sup>2</sup>      |
| 5 <sup>2</sup>        | 15/15 <sup>(4)</sup>   | 15/15 <sup>(4)</sup>   | 64 <sup>2</sup>             | 15/15 <sup>(4)</sup>           | 30/15 <sup>2</sup>          | 24/15 <sup>2</sup>        | 134/15 <sup>2</sup>                        | 4 <sup>2</sup>                 | 1 <sup>2</sup>                   | 1.0 <sup>2</sup>                                 | 0.0 <sup>2</sup>                    | 21 <sup>2</sup>                      | 81 <sup>2</sup>      |

Note 1:  $\Delta ACK$ ,  $\Delta NACK$  and  $\Delta CQI = 8$   $A_{hs} = \beta_{hs}/\beta_c = 30/15$   $\beta_{hs} = 30/15 * \beta_c$

Note 2: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference<sup>2</sup>

Note 3 : For subtest 1 the  $\beta_c/\beta_d$  ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 10/15$  and  $\beta_d = 15/15$ <sup>2</sup>

Note 4 : For subtest 5 the  $\beta_c/\beta_d$  ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 14/15$  and  $\beta_d = 15/15$ <sup>2</sup>

Note 5 : Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g<sup>2</sup>

Note 6:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.<sup>2</sup>

## HSUPA UE category

| UE E-DCH Category | Maximum E-DCH Codes Transmitted | Number of HARQ Processes | E-DCH TTI(ms) | Minimum Spreading Factor | Maximum E-DCH Transport Block Bits | Max Rate (Mbps) |
|-------------------|---------------------------------|--------------------------|---------------|--------------------------|------------------------------------|-----------------|
| 1                 | 1                               | 4                        | 10            | 4                        | 7110                               | 0.7296          |
| 2                 | 2                               | 8                        | 2             | 4                        | 2798                               | 1.4592          |
|                   | 2                               | 4                        | 10            | 4                        | 14484                              |                 |
| 3                 | 2                               | 4                        | 10            | 4                        | 14484                              | 1.4592          |
| 4                 | 2                               | 8                        | 2             | 2                        | 5772                               | 2.9185          |
|                   | 2                               | 4                        | 10            | 2                        | 20000                              | 2.00            |
| 5                 | 2                               | 4                        | 10            | 2                        | 20000                              | 2.00            |
| 6<br>(No DPDCH)   | 4                               | 8                        | 10            | 2SF2&2SF4                | 11484                              | 5.76            |
|                   | 4                               | 4                        | 2             |                          | 20000                              | 2.00            |
| 7<br>(No DPDCH)   | 4                               | 8                        | 2             | 2SF2&2SF4                | 22996                              | ?               |
|                   | 4                               | 4                        | 10            |                          | 20000                              | ?               |

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4. UE categories 1 to 6 support QPSK only. UE category 7 supports QPSK and 16QAM. (TS25.306-7.3.0).

## 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 TS 34.121-1 to determine SAR test reduction. A primary and a Second serving HS-DSCH cell are required to perform the power measurement and for the results to be acceptable.

The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0. A summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0  
Levels for HSDPA connection setup

| Parameter<br>During Connection setup | Unit | Value |
|--------------------------------------|------|-------|
| P-CPICH_Ec/Ior                       | dB   | -10   |
| P-CCPCH and SCH_Ec/Ior               | dB   | -12   |
| PICH_Ec/Ior                          | dB   | -15   |
| HS-PDSCH                             | dB   | off   |
| HS-SCCH_1                            | dB   | off   |
| DPCH_Ec/Ior                          | dB   | -5    |
| OCNS_Ec/Ior                          | dB   | -3.1  |

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.

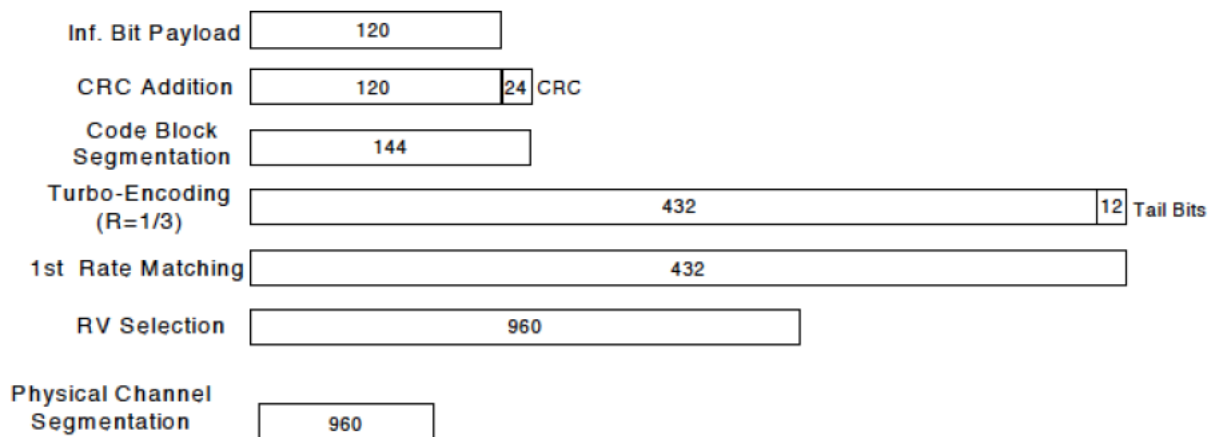
The measurements were performed with a Fixed Reference Channel (FRC) H-Set 12 with QPSK

| Parameter                        | Value       |
|----------------------------------|-------------|
| Nominal average inf. bit rate    | 60 kbit/s   |
| Inter-TTI Distance               | 1 TTI's     |
| Number of HARQ Processes         | 6 Processes |
| Information Bit Payload          | 120 Bits    |
| Number Code Blocks               | 1 Block     |
| Binary Channel Bits Per TTI      | 960 Bits    |
| Total Available SMLs in UE       | 19200 SMLs  |
| Number of SMLs per HARQ Process  | 3200 SMLs   |
| Coding Rate                      | 0.15        |
| Number of Physical Channel Codes | 1           |

Note:

1.The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table above.

2.Maximum number of transmission is limited to 1,i.e.,retransmission is not allowed. The redundancy and constellation version 0 shall be used.



**Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)**

The following 4 Sub-tests for HSDPA were completed according to Release 5 procedures. A summary of subtest settings are illustrated below:

| Sub-test <sup>o</sup> | $\beta_c$ <sup>o</sup> | $\beta_d$ <sup>o</sup> | $\beta_d$ (SF) <sup>o</sup> | $\beta_c/\beta_d$ <sup>o</sup> | $\beta_{hs}(1)$ <sup>o</sup> | CM(dB)(2) <sup>o</sup> | MPR (dB) <sup>o</sup> |
|-----------------------|------------------------|------------------------|-----------------------------|--------------------------------|------------------------------|------------------------|-----------------------|
| 1 <sup>o</sup>        | 2/15 <sup>o</sup>      | 15/15 <sup>o</sup>     | 64 <sup>o</sup>             | 2/15 <sup>o</sup>              | 4/15 <sup>o</sup>            | 0.0 <sup>o</sup>       | 0 <sup>o</sup>        |
| 2 <sup>o</sup>        | 12/15(3) <sup>o</sup>  | 15/15(3) <sup>o</sup>  | 64 <sup>o</sup>             | 12/15(3) <sup>o</sup>          | 24/15 <sup>o</sup>           | 1.0 <sup>o</sup>       | 0 <sup>o</sup>        |
| 3 <sup>o</sup>        | 15/15 <sup>o</sup>     | 8/15 <sup>o</sup>      | 64 <sup>o</sup>             | 15/8 <sup>o</sup>              | 30/15 <sup>o</sup>           | 1.5 <sup>o</sup>       | 0.5 <sup>o</sup>      |
| 4 <sup>o</sup>        | 15/15 <sup>o</sup>     | 4/15 <sup>o</sup>      | 64 <sup>o</sup>             | 15/4 <sup>o</sup>              | 30/15 <sup>o</sup>           | 1.5 <sup>o</sup>       | 0.5 <sup>o</sup>      |

Note 1:  $\Delta ACK$ ,  $\Delta NACK$  and  $\Delta CQI=8$   $A_{hs} = \beta_{hs}/\beta_c = 30/15$   $\beta_{hs} = 30/15 * \beta_c$

Note 2: CM=1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 3: For subtest 2 the  $\beta_c/\beta_d$  ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .

Up commands are set continuously to set the UE to Max power.

## 6. HSPA+

An E-DCH call is set up according to TS 34.108 [3] 7.3.9 with the following exceptions in the RADIO BEARER SETUP messages. These exceptions allow the beta values to be set according to table C.11.1.4 and each UL physical channel to be at constant power at the start of the measurement. RF parameters are set up according to table E.5.A.1. Settings for the serving cell are defined in table 5.2E.4. Uplink SRB for DCCH mapped on E-DCH and downlink SRB for DCCH on DCH. E-DCH is configured with 2ms TTI.

**Table C.11.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM**

| Sub-test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | $\beta_c$<br>(Note 3) | $\beta_d$ | $\beta_{HS}$<br>(Note 1) | $\beta_{ec}$ | $\beta_{ed}$<br>(2xSF2)<br>(Note 4)            | $\beta_{ed}$<br>(2xSF4)<br>(Note 4)            | CM<br>(dB)<br>(Note 2) | MPR<br>(dB)<br>(Note 2) | AG<br>Index<br>(Note 4) | E-TFCI<br>(Note 5) | E-TFCI<br>(boost) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|--------------------------|--------------|------------------------------------------------|------------------------------------------------|------------------------|-------------------------|-------------------------|--------------------|-------------------|
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1                     | 0         | 30/15                    | 30/15        | $\beta_{ed1}$ : 30/15<br>$\beta_{ed2}$ : 30/15 | $\beta_{ed3}$ : 24/15<br>$\beta_{ed4}$ : 24/15 | 3.5                    | 2.5                     | 14                      | 105                | 105               |
| <p>Note 1: <math>\Delta_{ACK}</math>, <math>\Delta_{NACK}</math> and <math>\Delta_{CQI} = 30/15</math> with <math>\beta_{hs} = 30/15 * \beta_c</math>.</p> <p>Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).</p> <p>Note 3: DPDCH is not configured, therefore the <math>\beta_c</math> is set to 1 and <math>\beta_d = 0</math> by default.</p> <p>Note 4: <math>\beta_{ed}</math> can not be set directly; it is set by Absolute Grant Value.</p> <p>Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.</p> |                       |           |                          |              |                                                |                                                |                        |                         |                         |                    |                   |

### Note:

1. The Dual Carriers transmission support HSDPA and HSUPA physical channels.
2. The Dual Carriers belong to the same Node and are on adjacent carriers.
3. The Dual Carriers do not support MIMO to serve UEs configured for dual cell operation.
4. The Dual Carriers operate in the same frequency band.
5. The device doesn't support the modulation of 16QAM in uplink but 64QAM in downlink for DC-HSDPA mode.
6. The device doesn't support carrier aggregation for it just can operate in Release 8.

### 6.1.3 LTE TEST CONFIGURATION

SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices. The CMW500 Wide Band Radio Communication Tester was 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 test were performed with the same number of RB and RB offsets transmitting on all TTI frames (Maximum TTI).

#### 1. Spectrum Plots for RB configurations

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

#### 2. MPR

When MPR is implemented permanently within the UE, regardless of network requirements, only those RB configurations allowed by 3GPP for the channel bandwidth and modulation. Combinations may be tested with MPR active. Configurations with RB allocations less than the RB thresholds required by 3GPP must be tested without MPR.

The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101:

**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3**

| Modulation | Channel bandwidth / Transmission bandwidth ( $N_{RB}$ ) |            |          |           |           |           | MPR (dB) |
|------------|---------------------------------------------------------|------------|----------|-----------|-----------|-----------|----------|
|            | 1.4<br>MHz                                              | 3.0<br>MHz | 5<br>MHz | 10<br>MHz | 15<br>MHz | 20<br>MHz |          |
| QPSK       | > 5                                                     | > 4        | > 8      | > 12      | > 16      | > 18      | $\leq 1$ |
| 16 QAM     | $\leq 5$                                                | $\leq 4$   | $\leq 8$ | $\leq 12$ | $\leq 16$ | $\leq 18$ | $\leq 1$ |
| 16 QAM     | > 5                                                     | > 4        | > 8      | > 12      | > 16      | > 18      | $\leq 2$ |

### 3. A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by using Network Signalling Value of "NS\_01" on the base station simulator.

### 4. LTE procedures for SAR testing

#### A) Largest channel bandwidth standalone SAR test requirements

##### i) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is  $\leq 0.8$  W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is  $> 1.45$  W/kg, SAR is required for all three RB offset configurations for that required test channel.

##### ii) QPSK with 50% RB allocation

The procedures required for 1 RB allocation in i) are applied to measure the SAR for QPSK with 50% RB allocation.

##### iii) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in i) and ii) are  $\leq 0.8$  W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is  $> 1.45$  W/kg, the remaining required test channels must also be tested.

##### iv) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is  $> \frac{1}{2}$  dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is  $> 1.45$  W/kg.

#### B) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is  $> \frac{1}{2}$  dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is  $> 1.45$  W/kg.

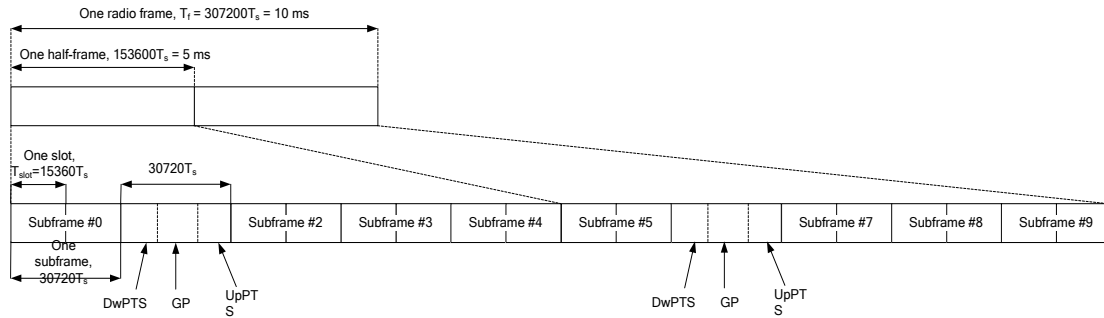
## LTE (TDD) Test Configuration

According to KDB 941225 D05 SAR for LTE Devices V02r05, 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.

TDD LTE B38/41 supports 3GPP TS 36 for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the slot, according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

TDD LTE B38/41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

**Figure 4.2-1: Frame structure type 2**



**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                              | $26336 \cdot T_s$                |                                |                                  | $7680 \cdot T_s$                   | $4384 \cdot T_s$               | $5120 \cdot T_s$                 |
| 5                              | $6592 \cdot T_s$                 | $4384 \cdot T_s$               | $5120 \cdot T_s$                 | $20480 \cdot T_s$                  |                                |                                  |
| 6                              | $19760 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 7                              | $21952 \cdot T_s$                |                                |                                  | $12800 \cdot T_s$                  |                                |                                  |
| 8                              | $24144 \cdot T_s$                |                                |                                  | -                                  | -                              | -                                |
| 9                              | $13168 \cdot T_s$                |                                |                                  | -                                  | -                              | -                                |

**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 |

According to Figure 4.2-1, one radio frame is configured by 10 subframes, which consist of Uplink-subframe, Downlink-subframe and Special subframe. For TDD-LTE, the Duty Cycle should be calculated on Uplink-subframes and Special subframes, due to Special subframe containing both Uplink transmissions. So for one radio frame, Duty Cycle can be calculated with formula as below. The count of Uplink subframes are according to Table 4.2-2:

$$\text{Duty cycle} = (\text{30720Ts} * \text{Ups} + \text{Uplink Component} * \text{Specials}) / (\text{307200Ts})$$

About the uplink component of Special subframes, we can figure out by Table 4.2-1:

$$\text{Uplink Component} = \text{UpPTS}$$

In conclusion, for the TDD LTE B38/41, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

$$\text{Duty cycle} = [(\text{30720Ts} * \text{Ups}) + \text{UpPTS} * \text{Specials}] / (\text{307200Ts})$$

And we can get different Duty cycles under different configurations:

| Uplink-downlink configuration | Subframe number |   |   | Configuration of special subframe |                   |                                  |                   |                                    |                   |                                  |                   |
|-------------------------------|-----------------|---|---|-----------------------------------|-------------------|----------------------------------|-------------------|------------------------------------|-------------------|----------------------------------|-------------------|
|                               |                 |   |   | Normal cyclic prefix in downlink  |                   |                                  |                   | Extended cyclic prefix in downlink |                   |                                  |                   |
|                               |                 |   |   | Normal cyclic prefix in uplink    |                   | Extended cyclic prefix in uplink |                   | Normal cyclic prefix in uplink     |                   | Extended cyclic prefix in uplink |                   |
|                               | D               | S | U | configuration 0-4                 | configuration 5-9 | configuration 0-4                | configuration 5-9 | configuration 0-3                  | configuration 4-7 | configuration 0-3                | configuration 4-7 |
| 0                             | 2               | 2 | 6 | 61.43%                            | 62.85%            | 61.67%                           | 63.33%            | 61.43%                             | 62.85%            | 61.67%                           | 63.33%            |
| 1                             | 4               | 2 | 4 | 41.43%                            | 42.85%            | 41.67%                           | 43.33%            | 41.43%                             | 42.85%            | 41.67%                           | 43.33%            |
| 2                             | 6               | 2 | 2 | 21.43%                            | 22.85%            | 21.67%                           | 23.33%            | 21.43%                             | 22.85%            | 21.67%                           | 23.33%            |
| 3                             | 6               | 1 | 3 | 30.71%                            | 31.43%            | 30.83%                           | 31.67%            | 30.71%                             | 31.43%            | 30.83%                           | 31.67%            |
| 4                             | 7               | 1 | 2 | 20.71%                            | 21.43%            | 20.83%                           | 21.67%            | 20.71%                             | 21.43%            | 20.83%                           | 21.67%            |
| 5                             | 8               | 1 | 1 | 10.71%                            | 11.43%            | 10.83%                           | 11.67%            | 10.71%                             | 11.43%            | 10.83%                           | 11.67%            |
| 6                             | 3               | 2 | 5 | 51.43%                            | 52.85%            | 51.67%                           | 53.33%            | 51.43%                             | 52.85%            | 51.67%                           | 53.33%            |

For TDD LTE, SAR should be tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7 for Frame structure type 2.

## 6.1.4 WIFI TEST CONFIGURATION

For WLAN SAR testing, WLAN engineering testing software installed on the DUT can provide continuous transmitting RF signal.

### 2.4G

| Mode         | 802.11b | 802.11g | 802.11n HT20 |
|--------------|---------|---------|--------------|
| Duty cycle   | 100%    |         |              |
| Crest factor | 1       |         |              |

### 5G

| Mode         | 802.11a | 802.11n HT20 | 802.11n HT40 | 802.11ac HT20 | 802.11ac HT40 | 802.11ac VH80 |
|--------------|---------|--------------|--------------|---------------|---------------|---------------|
| Duty cycle   | 100%    |              |              |               |               |               |
| Crest factor | 1       |              |              |               |               |               |

For WiFi SAR testing, a communication link is set up with the test mode software for WiFi mode test. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. The RF signal utilized in SAR measurement has 100% duty cycle and its crest factor is 1. The test procedures in KDB 248227 D01 are applied.

### 6.1.4.1 2.4G SAR Test Requirements

#### 802.11b DSSS SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either a 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 in that exposure configuration.
- 2) When the reported SAR is  $> 0.8$  W/kg, SAR is required for that exposure configuration 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 802.11g/n OFDM SAR Test Exclusion Requirements

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied. SAR is not required for the following 2.4 GHz OFDM conditions.

- 1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
- 2) When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg.

#### SAR Test Requirements for OFDM configurations

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

#### 6.1.4.2 5G SAR Test Requirements

##### ✧ U-NII-1 and U-NII-2A Band

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is  $\leq 1.2$  W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, both bands are tested independently for SAR. When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is  $\leq 1.2$  W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, both bands are tested independently for SAR.

##### ✧ U-NII-2C, U-NII-3 Bands

The frequency range covered by these bands is 380 MHz (5.47 – 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 – 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, they must be considered for SAR testing.

To maintain SAR measurement accuracy and to facilitate test reduction, the channels in U-NII-2C band above 5.65 GHz may be grouped with the 5.8 GHz channels in U-NII-3 or §15.247 band to enable two SAR probe calibration frequency points to cover the bands, including the band gap channels.<sup>11</sup> When band gap channels are supported and the bands are not aggregated for SAR testing, band gap channels must be considered independently in each band according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

#### 6.1.4.3 OFDM transmission mode and SAR test channel selection

For the 2.4GHz and 5GHz 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. When the maximum output power of a channel is the same for equivalent OFDM configurations (for example 802.11a, 802.11n and 802.11ac, 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 is 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.

#### 6.1.4.4 Initial test configuration procedure

For OFDM, in both 2.4GHz and 5GHz 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 powers is the initial test channel. Otherwise, the channel of the transmission mode with the highest average RF output 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  $\leq 1.2$  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 measurement.

## 6.2 TEST POSITION

### 6.2.1 HEAD TEST CONFIGURATION

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

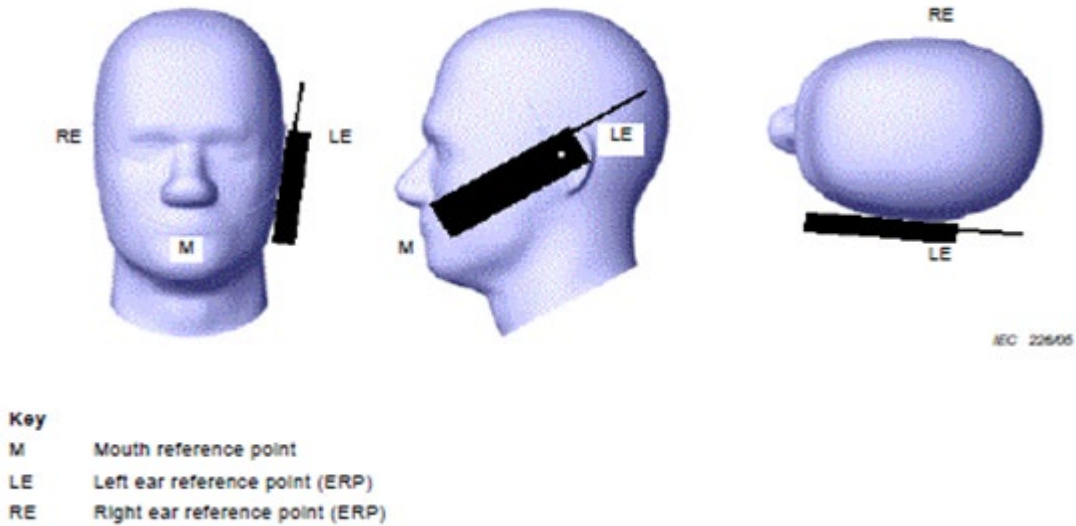


Figure 1 Cheek position of the wireless device on the left side of SAM

Note1: Cheek position of the wireless device on Right side of SAM also is similar to the left side represented above.

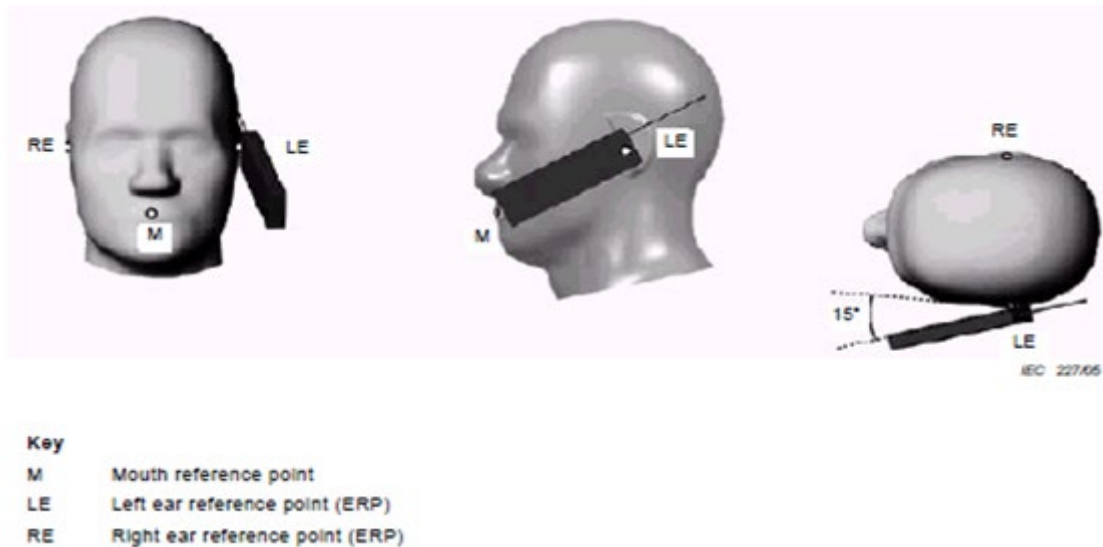


Figure 2 Tilt position of the wireless device on the left side of SAM

Note2: Tilt position of the wireless device on Right side of SAM also is similar to the left side represented above.

### 6.2.2 BODY-WORN TEST CONFIGURATION

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. The distance between the device and the phantom was kept 15mm.

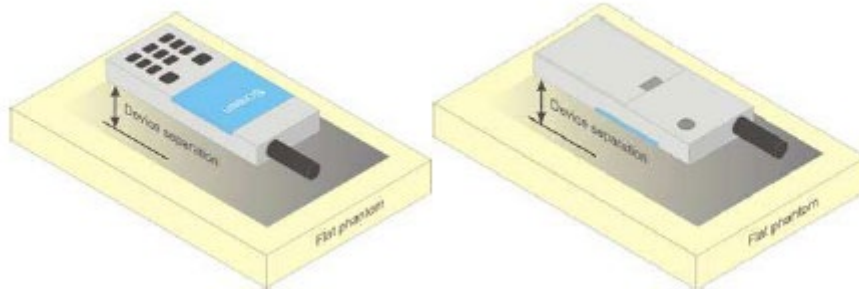


Figure 3 Test positions for body-worn device

### 6.2.3 HOTSPOT TEST CONFIGURATION

Per FCC KDB 941225D06, the SAR test separation distance for hotspot mode is determined according to device form factor. When the overall length and width of a device is  $> 9\text{cm} \times 5\text{cm}$ , a test separation distance of 10mm is required for hotspot mode SAR measurements. A test separation distance of 5mm or less is required for smaller devices. Hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25mm from that surface or edge; for the data modes, wireless technologies and frequency bands supporting hotspot mode. The SAR results are used to determine simultaneous transmission SAR test exclusion for hotspot mode; otherwise, simultaneous transmission SAR measurement is required.

### 6.2.4 PRODUCT SPECIFIC 10-G SAR TEST CONFIGURATION

Per KDB 648474 D04, for smart phones with a display diagonal dimension  $> 15.0\text{cm}$  or an overall diagonal dimension  $> 16.0\text{cm}$  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 device is marketed as “Phablet”. The UMPC mini-tablets procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at  $\leq 25\text{mm}$  from that surface or edge, in direct contact with a flat phantom, for product specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR  $> 1.2\text{W/kg}$ ; when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

The location of the antenna inside EUT and the test position judgment of Hotspot/Specific 10g SAR, please refer to Appendix E.

### 6.3 GENERAL DESCRIPTION OF TEST PROCEDURES

Connection to the EUT is established via air interface with Anritsu MT8820C & Anritsu MT8821C & R&S CMW500, and the EUT is set to maximum output power by Anritsu MT8820C & Anritsu MT8821C & R&S CMW500. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. The antenna connected to the output of the base station simulator shall be placed at least 50cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30dB.

### 6.4 RECEIVER DETECTION MECHANISM

#### 6.4.1 GENERAL DESCRIPTION OF RECEIVER DETECTION MECHANISM OF 2G&3G&4G

The device supports the receiver detection mechanism. The main purpose is to minimize triggering associated with power reduction scenarios by receiver detection mechanisms and provide enhanced user experience.

This device uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G antenna accordingly.

**Table: Summary of Receiver detection mechanism**

| Antenna              | Receiver on (Head) | Receiver off (Body-worn & Hotspot & Specific 10g SAR) |
|----------------------|--------------------|-------------------------------------------------------|
| 2G&3G&4G Main Ant.   | Power Level A1     | Power Level B1                                        |
| 2G&3G&4G Second Ant. | Power Level A2     | Power Level B2                                        |

| Down Antenna Max Power (dBm)                          |         |          |         |         |         |        |        |        |        |         |         |         |         |         |         |
|-------------------------------------------------------|---------|----------|---------|---------|---------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| Power scenario                                        | GSM 850 | GSM 1900 | UMTS B2 | UMTS B4 | UMTS B5 | LTE B2 | LTE B4 | LTE B5 | LTE B7 | LTE B12 | LTE B17 | LTE B26 | LTE B38 | LTE B41 | LTE B66 |
| Receiver on (Head)                                    | 33.5    | 30.5     | 24      | 24      | 24      | 24     | 24     | 24     | 24     | 24      | 24      | 24      | 23.5    | 23.5    | 24      |
| Receiver off (Body-worn & Hotspot & Specific 10g SAR) | 32.5    | 28.5     | 20.5    | 21      | 24      | 20.5   | 21     | 24     | 21.5   | 24      | 24      | 24      | 22.5    | 22.5    | 21      |

| Up Antenna Max Power (dBm)                            |         |          |         |         |         |        |        |        |        |         |         |         |         |         |         |
|-------------------------------------------------------|---------|----------|---------|---------|---------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| Power scenario                                        | GSM 850 | GSM 1900 | UMTS B2 | UMTS B4 | UMTS B5 | LTE B2 | LTE B4 | LTE B5 | LTE B7 | LTE B12 | LTE B17 | LTE B26 | LTE B38 | LTE B41 | LTE B66 |
| Receiver on (Head)                                    | 32.5    | 26       | 17      | 19      | 24      | 17     | 18     | 24     | 17     | 24      | 24      | 24      | 18.5    | 18.5    | 20      |
| Receiver off (Body-worn & Hotspot & Specific 10g SAR) | 33.5    | 29       | 20.5    | 21      | 24      | 20.5   | 22     | 24     | 18     | 24      | 24      | 24      | 20      | 20      | 21      |

#### 6.4.2 GENERAL DESCRIPTION OF RECEIVER DETECTION MECHANISM OF WIFI

Users will be in full power when using WiFi alone. When WiFi+2G/3G/4G are used simultaneously, WiFi power reduction will be triggered, i.e. WiFi will be in power level B3 state.

| Antenna   | WiFi Power Reduction |                                         |
|-----------|----------------------|-----------------------------------------|
|           | WiFi only            | WiFi Antenna Simultaneous with 2G&3G&4G |
| WiFi Ant. | Power Level A3       | Power Level B3                          |

| Power scenario                                                | 2.4G        |             |               | 5G<br>(5150MHz~5250MHz) |                        |                        |                | 5G(Not Suport Hotspot)<br>(5260MHz~5350MHz) |                        |                        |                |
|---------------------------------------------------------------|-------------|-------------|---------------|-------------------------|------------------------|------------------------|----------------|---------------------------------------------|------------------------|------------------------|----------------|
|                                                               | 802.11<br>b | 802.11<br>g | 802.11<br>n20 | 802.11<br>a             | 802.11<br>n20/<br>ac20 | 802.11<br>n40/<br>ac40 | 802.11<br>ac80 | 802.11<br>a                                 | 802.11<br>n20/<br>ac20 | 802.11<br>n40/<br>ac40 | 802.11<br>ac80 |
| WiFi only<br>(Full Power & Body-worn)                         | 19          | 19          | 19            | 20                      | 20                     | 19                     | 19             | 20                                          | 20                     | 19                     | 19             |
| Receiver on<br>(Head)                                         | 18          | 18          | 18            | 13                      | 13                     | 12                     | 12             | 13                                          | 13                     | 12                     | 12             |
| Receiver off<br>(Hotspot)                                     | 18          | 18          | 18            | 13                      | 13                     | 12                     | 12             | -                                           | -                      | -                      | -              |
| Receiver off<br>(Specific 10g SAR)                            | -           | -           | -             | -                       | -                      | -                      | -              | 19                                          | 19                     | 18                     | 18             |
| WiFi Antenna Simultaneous with<br>2G&3G&4G receiver on (Head) | 14          | 13          | 13            | 10                      | 10                     | 9                      | 9              | 10                                          | 10                     | 9                      | 9              |

| Power scenario                                                | 2.4G |     | 5G (Not Suport Hotspot)<br>(5500MHz~5700MHz) |                        |                        |                | 5G<br>(5750MHz~5850MHz) |                        |                        |                |
|---------------------------------------------------------------|------|-----|----------------------------------------------|------------------------|------------------------|----------------|-------------------------|------------------------|------------------------|----------------|
|                                                               | BT   | BLE | 802.11<br>a                                  | 802.11<br>n20/<br>ac20 | 802.11<br>n40/<br>ac40 | 802.11<br>ac80 | 802.11<br>a             | 802.11<br>n20/<br>ac20 | 802.11<br>n40/<br>ac40 | 802.11<br>ac80 |
| WiFi only<br>(Full Power & Body-worn)                         | 11   | 6   | 20                                           | 20                     | 19                     | 19             | 20                      | 20                     | 19                     | 19             |
| Receiver on<br>(Head)                                         | -    | -   | 13                                           | 13                     | 12                     | 12             | 11                      | 11                     | 10                     | 10             |
| Receiver off<br>(Hotspot)                                     | -    | -   | -                                            | -                      | -                      | -              | 11                      | 11                     | 10                     | 10             |
| Receiver off<br>(Specific 10g SAR)                            | -    | -   | 20                                           | 20                     | 19                     | 19             | -                       | -                      | -                      | -              |
| WiFi Antenna Simultaneous with<br>2G&3G&4G receiver on (Head) | -    | -   | 9                                            | 9                      | 8                      | 8              | 8                       | 8                      | 7                      | 7              |

### 6.4.3 MORE DETAILS INFORMATION FOLLOWINGS

**For head SAR test,**

- 1) Standalone Head SAR of 2G&3G&4G Down Antenna is evaluated at power level A1;
- 2) Standalone Head SAR of 2G&3G&4G Up Antenna is evaluated at power level A2;
- 3) Standalone Head SAR of WiFi Antenna receiver on is evaluated at power level A3;
- 4) Simultaneous Head SAR of WiFi Antenna with 2G&3G&4G is evaluated at power level B3;

Note: As the receiver only works in voice mode when the user is making a call in head scenario, In LTE Data/ WCDMA RMC (Data) mode, the mobile phone won't ring and answer, it just can be connected with the test instrument. Therefore, for Head SAR test of UMTS and LTE, we're planning to test LTE Data/ WCDMA RMC (Data) mode through triggering the receiver on by XML test scripts in order to simulate the users' scene (LTE VOIP, WCDMA VOIP).

**For body-worn & hotspot & specific 10g SAR test,**

- 1) Standalone body-worn & hotspot & specific 10g SAR of 2G&3G&4G Down Antenna is evaluated at power level B1;
- 2) Standalone body-worn & hotspot & specific 10g SAR of 2G&3G&4G Up Antenna is evaluated at power level B2;
- 3) Standalone body-worn & hotspot & specific 10g SAR of WiFi Antenna receiver on is evaluated at power level A3;
- 4) Simultaneous body-worn & hotspot & specific 10g SAR of WiFi Antenna with 2G&3G&4G is evaluated at power level B3;

Note: As the receiver will not work during body-worn voice mode operation with the headset connected. When the receiver is off, the power level with headset connected is the same as those without headset connected. So body-worn & hotspot SAR with headset is tested at the body-worn & hotspot & specific 10g SAR worst case without headset connected at the same power level.

## 7. TEST RESULT

### 7.1 CONDUCTED POWER RESULTS

#### 7.1.1 CONDUCTED POWER MEASUREMENTS OF GSM

##### 1. Conducted power measurements of GSM850

Down Antenna Receiver on

| GSM850                  |           | Max Burst Average Power (dBm) |                        |               |               | Max Frame Average Power (dBm) |                        |               |               |
|-------------------------|-----------|-------------------------------|------------------------|---------------|---------------|-------------------------------|------------------------|---------------|---------------|
|                         |           | Max.<br>Tune-up               | Channel/Frequency(MHz) |               |               | Max.<br>Tune-up               | Channel/Frequency(MHz) |               |               |
|                         |           |                               | 128/<br>824.2          | 190/<br>836.6 | 251/<br>848.8 |                               | 128/<br>824.2          | 190/<br>836.6 | 251/<br>848.8 |
| GSM (CS)                |           | 33.50                         | <b>32.35</b>           | <b>32.51</b>  | <b>32.47</b>  | 24.31                         | 23.16                  | 23.32         | 23.28         |
| GPRS/<br>EDGE<br>(GMSK) | 1 Tx Slot | 33.50                         | 32.35                  | 32.51         | 32.47         | 24.31                         | 23.16                  | 23.32         | 23.28         |
|                         | 2 Tx Slot | 32.00                         | 30.74                  | 30.94         | 30.95         | 25.87                         | 24.61                  | 24.81         | 24.82         |
|                         | 3 Tx Slot | 30.00                         | 28.76                  | 29.00         | 28.98         | 25.58                         | 24.34                  | 24.58         | 24.56         |
|                         | 4 Tx Slot | 29.00                         | 27.78                  | 28.00         | 28.02         | 25.82                         | 24.60                  | 24.82         | 24.84         |
| EDGE<br>(8PSK)          | 1 Tx Slot | 27.50                         | 25.72                  | 26.08         | 26.30         | 18.31                         | 16.53                  | 16.89         | 17.11         |
|                         | 2 Tx Slot | 26.50                         | 24.61                  | 24.96         | 25.18         | 20.37                         | 18.48                  | 18.83         | 19.05         |
|                         | 3 Tx Slot | 24.50                         | 22.56                  | 22.87         | 23.07         | 20.08                         | 18.14                  | 18.45         | 18.65         |
|                         | 4 Tx Slot | 23.50                         | 21.59                  | 21.63         | 21.91         | 20.32                         | 18.41                  | 18.45         | 18.73         |

Down Antenna Receiver off

| GSM850                  |           | Max Burst Average Power (dBm) |                        |               |               | Max Frame Average Power (dBm) |                        |               |               |
|-------------------------|-----------|-------------------------------|------------------------|---------------|---------------|-------------------------------|------------------------|---------------|---------------|
|                         |           | Max.<br>Tune-up               | Channel/Frequency(MHz) |               |               | Max.<br>Tune-up               | Channel/Frequency(MHz) |               |               |
|                         |           |                               | 128/<br>824.2          | 190/<br>836.6 | 251/<br>848.8 |                               | 128/<br>824.2          | 190/<br>836.6 | 251/<br>848.8 |
| GSM (CS)                |           | 32.50                         | 31.59                  | 31.75         | 31.75         | 23.31                         | 22.40                  | 22.56         | 22.56         |
| GPRS/<br>EDGE<br>(GMSK) | 1 Tx Slot | 32.50                         | 31.59                  | 31.75         | 31.75         | 23.31                         | 22.40                  | 22.56         | 22.56         |
|                         | 2 Tx Slot | 31.00                         | <b>29.41</b>           | <b>29.66</b>  | <b>29.64</b>  | <b>24.87</b>                  | 23.28                  | 23.53         | 23.51         |
|                         | 3 Tx Slot | 29.00                         | 27.25                  | 27.20         | 27.16         | 24.58                         | 22.83                  | 22.78         | 22.74         |
|                         | 4 Tx Slot | 28.00                         | 26.01                  | 26.26         | 26.27         | 24.82                         | 22.83                  | 23.08         | 23.09         |
| EDGE<br>(8PSK)          | 1 Tx Slot | 26.50                         | 24.72                  | 25.07         | 25.31         | 17.31                         | 15.53                  | 15.88         | 16.12         |
|                         | 2 Tx Slot | 25.50                         | 23.53                  | 23.91         | 24.12         | 19.37                         | 17.40                  | 17.78         | 17.99         |
|                         | 3 Tx Slot | 23.50                         | 21.65                  | 21.92         | 22.26         | 19.08                         | 17.23                  | 17.50         | 17.84         |
|                         | 4 Tx Slot | 22.50                         | 20.53                  | 20.69         | 20.86         | 19.32                         | 17.35                  | 17.51         | 17.68         |

Up Antenna Receiver on

| GSM850                  |           | Max Burst Average Power (dBm) |                        |               |               | Max Frame Average Power (dBm) |                        |               |               |
|-------------------------|-----------|-------------------------------|------------------------|---------------|---------------|-------------------------------|------------------------|---------------|---------------|
|                         |           | Max.<br>Tune-up               | Channel/Frequency(MHz) |               |               | Max.<br>Tune-up               | Channel/Frequency(MHz) |               |               |
|                         |           |                               | 128/<br>824.2          | 190/<br>836.6 | 251/<br>848.8 |                               | 128/<br>824.2          | 190/<br>836.6 | 251/<br>848.8 |
| GSM (CS)                |           | 32.50                         | 31.53                  | 31.67         | 31.66         | 23.31                         | 22.34                  | 22.48         | 22.47         |
| GPRS/<br>EDGE<br>(GMSK) | 1 Tx Slot | 32.50                         | 31.53                  | 31.67         | 31.66         | 23.31                         | 22.34                  | 22.48         | 22.47         |
|                         | 2 Tx Slot | 31.00                         | 29.13                  | 29.12         | 29.01         | 24.87                         | 23.00                  | 22.99         | 22.88         |
|                         | 3 Tx Slot | 29.00                         | 27.15                  | 27.33         | 27.28         | 24.58                         | 22.73                  | 22.91         | 22.86         |
|                         | 4 Tx Slot | 28.00                         | 26.13                  | 26.12         | 26.08         | 24.82                         | 22.95                  | 22.94         | 22.90         |
| EDGE<br>(8PSK)          | 1 Tx Slot | 26.50                         | 25.29                  | 25.62         | 25.42         | 17.31                         | 16.10                  | 16.43         | 16.23         |
|                         | 2 Tx Slot | 25.50                         | 23.65                  | 23.55         | 23.51         | 19.37                         | 17.52                  | 17.42         | 17.38         |
|                         | 3 Tx Slot | 23.50                         | 21.56                  | 21.98         | 21.87         | 19.08                         | 17.14                  | 17.56         | 17.45         |
|                         | 4 Tx Slot | 22.50                         | 20.66                  | 20.94         | 20.74         | 19.32                         | 17.48                  | 17.76         | 17.56         |

Up Antenna Receiver off

| GSM850                  |           | Max Burst Average Power (dBm) |                        |               |               | Max Frame Average Power (dBm) |                        |               |               |
|-------------------------|-----------|-------------------------------|------------------------|---------------|---------------|-------------------------------|------------------------|---------------|---------------|
|                         |           | Max.<br>Tune-up               | Channel/Frequency(MHz) |               |               | Max.<br>Tune-up               | Channel/Frequency(MHz) |               |               |
|                         |           |                               | 128/<br>824.2          | 190/<br>836.6 | 251/<br>848.8 |                               | 128/<br>824.2          | 190/<br>836.6 | 251/<br>848.8 |
| GSM (CS)                |           | 33.50                         | 32.50                  | 32.59         | 32.52         | 24.31                         | 23.31                  | 23.40         | 23.33         |
| GPRS/<br>EDGE<br>(GMSK) | 1 Tx Slot | 33.50                         | 32.50                  | 32.59         | 32.52         | 24.31                         | 23.31                  | 23.40         | 23.33         |
|                         | 2 Tx Slot | 32.00                         | 30.12                  | 30.27         | 30.18         | 25.87                         | 23.99                  | 24.14         | 24.05         |
|                         | 3 Tx Slot | 30.00                         | 28.30                  | 28.49         | 28.37         | 25.58                         | 23.88                  | 24.07         | 23.95         |
|                         | 4 Tx Slot | 29.00                         | 27.03                  | 27.19         | 27.08         | 25.82                         | 23.85                  | 24.01         | 23.90         |
| EDGE<br>(8PSK)          | 1 Tx Slot | 27.50                         | 26.30                  | 26.59         | 26.72         | 18.31                         | 17.11                  | 17.40         | 17.53         |
|                         | 2 Tx Slot | 26.50                         | 24.61                  | 24.92         | 25.03         | 20.37                         | 18.48                  | 18.79         | 18.90         |
|                         | 3 Tx Slot | 24.50                         | 22.58                  | 22.81         | 23.00         | 20.08                         | 18.16                  | 18.39         | 18.58         |
|                         | 4 Tx Slot | 23.50                         | 21.69                  | 21.57         | 21.53         | 20.32                         | 18.51                  | 18.39         | 18.35         |

Note:

- 1) The conducted power of GSM850 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 time slots.
- 3) The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:  
Frame-averaged power=10 x log (Burst-averaged power mW x Slot used/8)
- 4) The tested channels are marks in bold.

## 2. Conducted power measurements of GSM1900

Down Antenna\_Receiver on

| GSM1900                 |           | Max Burst Average Power (dBm) |                        |              |                | Max Frame Average Power (dBm) |                        |              |                |
|-------------------------|-----------|-------------------------------|------------------------|--------------|----------------|-------------------------------|------------------------|--------------|----------------|
|                         |           | Max.<br>Tune-up               | Channel/Frequency(MHz) |              |                | Max.<br>Tune-up               | Channel/Frequency(MHz) |              |                |
|                         |           |                               | 512/<br>1850.2         | 661/<br>1880 | 810/<br>1909.8 |                               | 512/<br>1850.2         | 661/<br>1880 | 810/<br>1909.8 |
| GSM (CS)                |           | 30.50                         | 29.09                  | 29.06        | 29.13          | 21.31                         | 19.90                  | 19.87        | 19.94          |
| GPRS/<br>EDGE<br>(GMSK) | 1 Tx Slot | 30.50                         | 29.09                  | 29.06        | 29.13          | 21.31                         | 19.90                  | 19.87        | 19.94          |
|                         | 2 Tx Slot | 28.50                         | 27.55                  | 27.54        | 27.71          | 22.37                         | 21.42                  | 21.41        | 21.58          |
|                         | 3 Tx Slot | 27.00                         | 25.52                  | 25.49        | 25.70          | 22.58                         | 21.10                  | 21.07        | 21.28          |
|                         | 4 Tx Slot | 26.00                         | 24.68                  | 24.50        | 24.74          | 22.82                         | 21.50                  | 21.32        | 21.56          |
| EDGE<br>(8PSK)          | 1 Tx Slot | 26.00                         | 25.09                  | 24.98        | 24.96          | 16.81                         | 15.90                  | 15.79        | 15.77          |
|                         | 2 Tx Slot | 25.00                         | 23.89                  | 23.78        | 23.83          | 18.87                         | 17.76                  | 17.65        | 17.70          |
|                         | 3 Tx Slot | 23.00                         | 21.75                  | 21.63        | 21.64          | 18.58                         | 17.33                  | 17.21        | 17.22          |
|                         | 4 Tx Slot | 22.50                         | 20.60                  | 20.52        | 20.55          | 19.32                         | 17.42                  | 17.34        | 17.37          |

Down Antenna\_Receiver off

| GSM1900                 |           | Max Burst Average Power (dBm) |                        |              |                | Max Frame Average Power (dBm) |                        |              |                |
|-------------------------|-----------|-------------------------------|------------------------|--------------|----------------|-------------------------------|------------------------|--------------|----------------|
|                         |           | Max.<br>Tune-up               | Channel/Frequency(MHz) |              |                | Max.<br>Tune-up               | Channel/Frequency(MHz) |              |                |
|                         |           |                               | 512/<br>1850.2         | 661/<br>1880 | 810/<br>1909.8 |                               | 512/<br>1850.2         | 661/<br>1880 | 810/<br>1909.8 |
| GSM (CS)                |           | 28.50                         | 27.61                  | 27.59        | 27.74          | 19.31                         | 18.42                  | 18.40        | 18.55          |
| GPRS/<br>EDGE<br>(GMSK) | 1 Tx Slot | 28.50                         | 27.61                  | 27.59        | 27.74          | 19.31                         | 18.42                  | 18.40        | 18.55          |
|                         | 2 Tx Slot | 26.50                         | 24.61                  | 24.58        | 24.82          | 20.37                         | 18.48                  | 18.45        | 18.69          |
|                         | 3 Tx Slot | 25.00                         | 23.51                  | 23.50        | 23.40          | 20.58                         | 19.09                  | 19.08        | 18.98          |
|                         | 4 Tx Slot | 24.00                         | 22.41                  | 22.51        | 22.39          | 20.82                         | 19.23                  | 19.33        | 19.21          |
| EDGE<br>(8PSK)          | 1 Tx Slot | 24.00                         | 23.11                  | 23.02        | 23.03          | 14.81                         | 13.92                  | 13.83        | 13.84          |
|                         | 2 Tx Slot | 23.00                         | 21.33                  | 21.32        | 21.29          | 16.87                         | 15.20                  | 15.19        | 15.16          |
|                         | 3 Tx Slot | 21.00                         | 19.54                  | 19.48        | 19.50          | 16.58                         | 15.12                  | 15.06        | 15.08          |
|                         | 4 Tx Slot | 20.50                         | 19.06                  | 18.78        | 18.85          | 17.32                         | 15.88                  | 15.60        | 15.67          |

Up Antenna Receiver on

| GSM1900                 |           | Max Burst Average Power (dBm) |                        |              |                | Max Frame Average Power (dBm) |                        |              |                |
|-------------------------|-----------|-------------------------------|------------------------|--------------|----------------|-------------------------------|------------------------|--------------|----------------|
|                         |           | Max.<br>Tune-up               | Channel/Frequency(MHz) |              |                | Max.<br>Tune-up               | Channel/Frequency(MHz) |              |                |
|                         |           |                               | 512/<br>1850.2         | 661/<br>1880 | 810/<br>1909.8 |                               | 512/<br>1850.2         | 661/<br>1880 | 810/<br>1909.8 |
| GSM (CS)                |           | 26.00                         | 25.53                  | 25.54        | 25.76          | 16.81                         | 16.34                  | 16.35        | 16.57          |
| GPRS/<br>EDGE<br>(GMSK) | 1 Tx Slot | 26.00                         | 25.53                  | 25.54        | 25.76          | 16.81                         | 16.34                  | 16.35        | 16.57          |
|                         | 2 Tx Slot | 24.00                         | 22.51                  | 22.54        | 22.81          | 17.87                         | 16.38                  | 16.41        | 16.68          |
|                         | 3 Tx Slot | 22.50                         | 20.76                  | 20.78        | 21.02          | 18.08                         | 16.34                  | 16.36        | 16.60          |
|                         | 4 Tx Slot | 21.50                         | 19.71                  | 19.50        | 19.79          | 18.32                         | 16.53                  | 16.32        | 16.61          |
| EDGE<br>(8PSK)          | 1 Tx Slot | 21.50                         | 20.95                  | 20.88        | 20.96          | 12.31                         | 11.76                  | 11.69        | 11.77          |
|                         | 2 Tx Slot | 20.50                         | 18.52                  | 18.54        | 18.59          | 14.37                         | 12.39                  | 12.41        | 12.46          |
|                         | 3 Tx Slot | 18.50                         | 17.07                  | 16.95        | 17.04          | 14.08                         | 12.65                  | 12.53        | 12.62          |
|                         | 4 Tx Slot | 18.00                         | 16.77                  | 16.75        | 16.83          | 14.82                         | 13.59                  | 13.57        | 13.65          |

Up Antenna Receiver off

| GSM1900                 |           | Max Burst Average Power (dBm) |                        |              |                | Max Frame Average Power (dBm) |                        |              |                |
|-------------------------|-----------|-------------------------------|------------------------|--------------|----------------|-------------------------------|------------------------|--------------|----------------|
|                         |           | Max.<br>Tune-up               | Channel/Frequency(MHz) |              |                | Max.<br>Tune-up               | Channel/Frequency(MHz) |              |                |
|                         |           |                               | 512/<br>1850.2         | 661/<br>1880 | 810/<br>1909.8 |                               | 512/<br>1850.2         | 661/<br>1880 | 810/<br>1909.8 |
| GSM (CS)                |           | 29.00                         | 28.42                  | 28.42        | 28.54          | 19.81                         | 19.23                  | 19.23        | 19.35          |
| GPRS/<br>EDGE<br>(GMSK) | 1 Tx Slot | 29.00                         | 28.42                  | 28.42        | 28.54          | 19.81                         | 19.23                  | 19.23        | 19.35          |
|                         | 2 Tx Slot | 27.00                         | 25.50                  | 25.51        | 25.74          | 20.87                         | 19.37                  | 19.38        | 19.61          |
|                         | 3 Tx Slot | 25.50                         | 23.71                  | 23.74        | 23.97          | 21.08                         | 19.29                  | 19.32        | 19.55          |
|                         | 4 Tx Slot | 24.50                         | 22.65                  | 22.67        | 22.74          | 21.32                         | 19.47                  | 19.49        | 19.56          |
| EDGE<br>(8PSK)          | 1 Tx Slot | 24.50                         | 23.95                  | 23.87        | 23.93          | 15.31                         | 14.76                  | 14.68        | 14.74          |
|                         | 2 Tx Slot | 23.50                         | 22.31                  | 22.29        | 22.37          | 17.37                         | 16.18                  | 16.16        | 16.24          |
|                         | 3 Tx Slot | 21.50                         | 20.49                  | 20.39        | 20.45          | 17.08                         | 16.07                  | 15.97        | 16.03          |
|                         | 4 Tx Slot | 21.00                         | 19.25                  | 19.04        | 19.14          | 17.82                         | 16.07                  | 15.86        | 15.96          |

Note:

- 1) The conducted power of GSM1900 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 time slots.
- 3) The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:  
Frame-averaged power=10 x log (Burst-averaged power mW x Slot used/8)
- 4) The tested channels are marks in bold.

## 7.1.2 CONDUCTED POWER MEASUREMENTS OF UMTS

### 1. Conducted power measurements of UMTS B2

Down Antenna Receiver on

| Band               | UMTS B2 Average Conducted Power(dBm) |        |       |        |
|--------------------|--------------------------------------|--------|-------|--------|
| Tx Channel         | Max.                                 | 9262   | 9400  | 9538   |
| Frequency(MHz)     | Tune-up                              | 1852.4 | 1880  | 1907.6 |
| AMR Voice          | 24.00                                | 22.78  | 22.91 | 22.92  |
| RMC 12.2K          | 24.00                                | 22.78  | 22.91 | 22.92  |
| HSDPA Subtest-1    | 23.50                                | 21.85  | 21.92 | 21.94  |
| HSDPA Subtest-2    | 23.50                                | 21.77  | 21.88 | 21.89  |
| HSDPA Subtest-3    | 22.50                                | 21.28  | 21.43 | 21.42  |
| HSDPA Subtest-4    | 22.50                                | 21.26  | 21.40 | 21.43  |
| HSUPA Subtest-1    | 22.50                                | 20.77  | 20.79 | 20.88  |
| HSUPA Subtest-2    | 22.50                                | 20.78  | 20.92 | 21.00  |
| HSUPA Subtest-3    | 23.50                                | 21.76  | 21.83 | 21.89  |
| HSUPA Subtest-4    | 22.00                                | 20.46  | 20.64 | 20.57  |
| HSUPA Subtest-5    | 23.50                                | 21.88  | 21.99 | 22.01  |
| DC-HSDPA Subtest-1 | 23.50                                | 21.85  | 21.92 | 21.94  |
| DC-HSDPA Subtest-2 | 23.50                                | 21.77  | 21.88 | 21.89  |
| DC-HSDPA Subtest-3 | 22.50                                | 21.28  | 21.43 | 21.42  |
| DC-HSDPA Subtest-4 | 22.50                                | 21.26  | 21.40 | 21.43  |
| HSPA+ Subtest-1    | 21.50                                | 20.63  | 20.74 | 20.82  |

Down Antenna Receiver off

| Band               | UMTS B2 Average Conducted Power(dBm) |        |       |        |
|--------------------|--------------------------------------|--------|-------|--------|
| Tx Channel         | Max.                                 | 9262   | 9400  | 9538   |
| Frequency(MHz)     | Tune-up                              | 1852.4 | 1880  | 1907.6 |
| AMR Voice          | 20.50                                | 19.26  | 19.38 | 19.36  |
| RMC 12.2K          | 20.50                                | 19.26  | 19.38 | 19.36  |
| HSDPA Subtest-1    | 20.00                                | 19.25  | 19.39 | 19.41  |
| HSDPA Subtest-2    | 20.00                                | 19.23  | 19.44 | 19.37  |
| HSDPA Subtest-3    | 19.00                                | 18.77  | 18.92 | 18.89  |
| HSDPA Subtest-4    | 19.00                                | 18.75  | 18.87 | 18.86  |
| HSUPA Subtest-1    | 19.00                                | 17.75  | 17.37 | 17.85  |
| HSUPA Subtest-2    | 19.00                                | 17.28  | 17.45 | 17.41  |
| HSUPA Subtest-3    | 20.00                                | 18.28  | 18.43 | 18.39  |
| HSUPA Subtest-4    | 18.50                                | 16.78  | 16.94 | 16.91  |
| HSUPA Subtest-5    | 20.00                                | 18.26  | 18.43 | 18.40  |
| DC-HSDPA Subtest-1 | 20.00                                | 19.25  | 19.39 | 19.41  |
| DC-HSDPA Subtest-2 | 20.00                                | 19.23  | 19.44 | 19.37  |
| DC-HSDPA Subtest-3 | 19.00                                | 18.77  | 18.92 | 18.89  |
| DC-HSDPA Subtest-4 | 19.00                                | 18.75  | 18.87 | 18.86  |
| HSPA+ Subtest-1    | 18.00                                | 17.77  | 17.96 | 17.96  |

Up Antenna Receiver on

| Band               | UMTS B2 Average Conducted Power(dBm) |        |       |        |
|--------------------|--------------------------------------|--------|-------|--------|
| Tx Channel         | Max.                                 | 9262   | 9400  | 9538   |
| Frequency(MHz)     | Tune-up                              | 1852.4 | 1880  | 1907.6 |
| AMR Voice          | 17.00                                | 16.12  | 16.18 | 16.13  |
| RMC 12.2K          | 17.00                                | 16.12  | 16.18 | 16.13  |
| HSDPA Subtest-1    | 16.50                                | 16.14  | 16.26 | 16.26  |
| HSDPA Subtest-2    | 16.50                                | 16.07  | 16.17 | 16.21  |
| HSDPA Subtest-3    | 15.50                                | 14.71  | 14.84 | 14.82  |
| HSDPA Subtest-4    | 15.50                                | 14.67  | 14.80 | 14.81  |
| HSUPA Subtest-1    | 15.50                                | 14.07  | 14.22 | 14.14  |
| HSUPA Subtest-2    | 15.50                                | 14.11  | 14.23 | 14.18  |
| HSUPA Subtest-3    | 16.50                                | 15.10  | 15.21 | 15.19  |
| HSUPA Subtest-4    | 15.00                                | 13.64  | 13.74 | 13.72  |
| HSUPA Subtest-5    | 16.50                                | 15.13  | 15.23 | 15.22  |
| DC-HSDPA Subtest-1 | 16.50                                | 16.14  | 16.26 | 16.26  |
| DC-HSDPA Subtest-2 | 16.50                                | 16.07  | 16.17 | 16.21  |
| DC-HSDPA Subtest-3 | 15.50                                | 14.71  | 14.84 | 14.82  |
| DC-HSDPA Subtest-4 | 15.50                                | 14.67  | 14.80 | 14.81  |
| HSPA+ Subtest-1    | 14.50                                | 14.20  | 14.32 | 14.28  |

Up Antenna Receiver off

| Band                      | UMTS B2 Average Conducted Power(dBm) |        |       |        |
|---------------------------|--------------------------------------|--------|-------|--------|
| Tx Channel                | Max.                                 | 9262   | 9400  | 9538   |
| Frequency(MHz)            | Tune-up                              | 1852.4 | 1880  | 1907.6 |
| <b>AMR Voice</b>          | 20.50                                | 19.63  | 19.76 | 19.73  |
| <b>RMC 12.2K</b>          | 20.50                                | 19.63  | 19.76 | 19.73  |
| <b>HSDPA Subtest-1</b>    | 20.00                                | 19.69  | 19.80 | 19.77  |
| <b>HSDPA Subtest-2</b>    | 20.00                                | 19.61  | 19.83 | 19.74  |
| <b>HSDPA Subtest-3</b>    | 19.00                                | 18.13  | 18.32 | 18.24  |
| <b>HSDPA Subtest-4</b>    | 19.00                                | 18.17  | 18.29 | 18.23  |
| <b>HSUPA Subtest-1</b>    | 19.00                                | 17.61  | 17.71 | 18.19  |
| <b>HSUPA Subtest-2</b>    | 19.00                                | 17.67  | 17.73 | 17.72  |
| <b>HSUPA Subtest-3</b>    | 20.00                                | 18.71  | 18.74 | 18.72  |
| <b>HSUPA Subtest-4</b>    | 18.50                                | 17.15  | 17.22 | 17.24  |
| <b>HSUPA Subtest-5</b>    | 20.00                                | 18.69  | 18.77 | 18.76  |
| <b>DC-HSDPA Subtest-1</b> | 20.00                                | 19.69  | 19.80 | 19.77  |
| <b>DC-HSDPA Subtest-2</b> | 20.00                                | 19.61  | 19.83 | 19.74  |
| <b>DC-HSDPA Subtest-3</b> | 19.00                                | 18.13  | 18.32 | 18.24  |
| <b>DC-HSDPA Subtest-4</b> | 19.00                                | 18.17  | 18.29 | 18.23  |
| <b>HSPA+ Subtest-1</b>    | 18.00                                | 17.55  | 17.73 | 17.70  |

Note:

- 1) The conducted power of UMTS B2 is measured with RMS detector.
- 2) Note: Per KDB941225 D01, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.
- 3) The tested channels are marks in bold.
- 4) The power of single channel and double channel is smaller than RMC12.2K, so SAR need not be tested.

## 2. Conducted power measurements of UMTS B4

Down Antenna\_Receiver on

| Band               | UMTS B4 Average Conducted Power(dBm) |              |              |              |
|--------------------|--------------------------------------|--------------|--------------|--------------|
| Tx Channel         | Max.                                 | 1312         | 1413         | 1513         |
| Frequency(MHz)     | Tune-up                              | 1712.4       | 1732.6       | 1752.6       |
| AMR Voice          | 24.00                                | <b>22.69</b> | <b>22.77</b> | <b>22.75</b> |
| RMC 12.2K          | 24.00                                | 22.69        | 22.77        | 22.75        |
| HSDPA Subtest-1    | 23.50                                | 21.71        | 21.76        | 21.79        |
| HSDPA Subtest-2    | 23.50                                | 21.65        | 21.75        | 21.73        |
| HSDPA Subtest-3    | 22.50                                | 21.19        | 21.32        | 21.28        |
| HSDPA Subtest-4    | 22.50                                | 21.18        | 21.26        | 21.30        |
| HSUPA Subtest-1    | 22.50                                | 20.56        | 20.68        | 20.58        |
| HSUPA Subtest-2    | 22.50                                | 20.71        | 20.79        | 20.91        |
| HSUPA Subtest-3    | 23.50                                | 21.61        | 21.75        | 21.55        |
| HSUPA Subtest-4    | 22.00                                | 20.36        | 20.47        | 20.52        |
| HSUPA Subtest-5    | 23.50                                | 21.78        | 21.91        | 21.95        |
| DC-HSDPA Subtest-1 | 23.50                                | 21.71        | 21.76        | 21.79        |
| DC-HSDPA Subtest-2 | 23.50                                | 21.65        | 21.75        | 21.73        |
| DC-HSDPA Subtest-3 | 22.50                                | 21.19        | 21.32        | 21.28        |
| DC-HSDPA Subtest-4 | 22.50                                | 21.18        | 21.26        | 21.30        |
| HSPA+ Subtest-1    | 21.50                                | 20.62        | 20.72        | 20.18        |

Down Antenna Receiver off

| Band               | UMTS B4 Average Conducted Power(dBm) |        |        |        |
|--------------------|--------------------------------------|--------|--------|--------|
| Tx Channel         | Max.                                 | 1312   | 1413   | 1513   |
| Frequency(MHz)     | Tune-up                              | 1712.4 | 1732.6 | 1752.6 |
| AMR Voice          | 21.00                                | 19.69  | 19.75  | 19.78  |
| RMC 12.2K          | 21.00                                | 19.69  | 19.75  | 19.78  |
| HSDPA Subtest-1    | 20.50                                | 19.73  | 19.79  | 19.80  |
| HSDPA Subtest-2    | 20.50                                | 19.65  | 19.76  | 19.72  |
| HSDPA Subtest-3    | 19.50                                | 19.16  | 19.29  | 19.25  |
| HSDPA Subtest-4    | 19.50                                | 19.15  | 19.24  | 19.26  |
| HSUPA Subtest-1    | 19.50                                | 17.71  | 17.81  | 17.82  |
| HSUPA Subtest-2    | 19.50                                | 17.72  | 17.81  | 17.84  |
| HSUPA Subtest-3    | 20.50                                | 18.66  | 18.77  | 18.80  |
| HSUPA Subtest-4    | 19.00                                | 17.23  | 17.29  | 17.33  |
| HSUPA Subtest-5    | 20.50                                | 18.64  | 18.77  | 18.81  |
| DC-HSDPA Subtest-1 | 20.50                                | 19.73  | 19.79  | 19.80  |
| DC-HSDPA Subtest-2 | 20.50                                | 19.65  | 19.76  | 19.72  |
| DC-HSDPA Subtest-3 | 19.50                                | 19.16  | 19.29  | 19.25  |
| DC-HSDPA Subtest-4 | 19.50                                | 19.15  | 19.24  | 19.26  |
| HSPA+ Subtest-1    | 18.50                                | 18.41  | 18.35  | 18.24  |

Up Antenna Receiver on

| Band               | UMTS B4 Average Conducted Power(dBm) |        |        |        |
|--------------------|--------------------------------------|--------|--------|--------|
| Tx Channel         | Max.                                 | 1312   | 1413   | 1513   |
| Frequency(MHz)     | Tune-up                              | 1712.4 | 1732.6 | 1752.6 |
| AMR Voice          | 19.00                                | 18.01  | 18.10  | 18.14  |
| RMC 12.2K          | 19.00                                | 18.01  | 18.10  | 18.14  |
| HSDPA Subtest-1    | 18.50                                | 18.06  | 18.17  | 18.15  |
| HSDPA Subtest-2    | 18.50                                | 18.01  | 18.16  | 18.13  |
| HSDPA Subtest-3    | 17.50                                | 16.59  | 16.58  | 16.53  |
| HSDPA Subtest-4    | 17.50                                | 16.40  | 16.49  | 16.53  |
| HSUPA Subtest-1    | 17.50                                | 16.00  | 16.11  | 16.66  |
| HSUPA Subtest-2    | 17.50                                | 16.03  | 16.16  | 16.18  |
| HSUPA Subtest-3    | 18.50                                | 16.98  | 17.14  | 17.17  |
| HSUPA Subtest-4    | 17.00                                | 15.59  | 15.67  | 15.73  |
| HSUPA Subtest-5    | 18.50                                | 17.02  | 17.16  | 17.17  |
| DC-HSDPA Subtest-1 | 18.50                                | 18.06  | 18.17  | 18.15  |
| DC-HSDPA Subtest-2 | 18.50                                | 18.01  | 18.16  | 18.13  |
| DC-HSDPA Subtest-3 | 17.50                                | 16.59  | 16.58  | 16.53  |
| DC-HSDPA Subtest-4 | 17.50                                | 16.40  | 16.49  | 16.53  |
| HSPA+ Subtest-1    | 16.50                                | 16.13  | 16.26  | 16.23  |

Up Antenna Receiver off

| Band               | UMTS B4 Average Conducted Power(dBm) |        |        |        |
|--------------------|--------------------------------------|--------|--------|--------|
| Tx Channel         | Max.                                 | 1312   | 1413   | 1513   |
| Frequency(MHz)     | Tune-up                              | 1712.4 | 1732.6 | 1752.6 |
| AMR Voice          | 21.00                                | 20.03  | 20.14  | 20.16  |
| RMC 12.2K          | 21.00                                | 20.03  | 20.14  | 20.16  |
| HSDPA Subtest-1    | 20.50                                | 20.08  | 20.17  | 20.14  |
| HSDPA Subtest-2    | 20.50                                | 20.02  | 20.10  | 20.12  |
| HSDPA Subtest-3    | 19.50                                | 18.53  | 18.65  | 18.63  |
| HSDPA Subtest-4    | 19.50                                | 18.55  | 18.65  | 18.61  |
| HSUPA Subtest-1    | 19.50                                | 18.05  | 18.66  | 18.19  |
| HSUPA Subtest-2    | 19.50                                | 18.07  | 18.18  | 18.23  |
| HSUPA Subtest-3    | 20.50                                | 19.00  | 19.13  | 19.15  |
| HSUPA Subtest-4    | 19.00                                | 17.59  | 17.67  | 17.72  |
| HSUPA Subtest-5    | 20.50                                | 19.03  | 19.15  | 19.17  |
| DC-HSDPA Subtest-1 | 20.50                                | 20.08  | 20.17  | 20.14  |
| DC-HSDPA Subtest-2 | 20.50                                | 20.02  | 20.10  | 20.12  |
| DC-HSDPA Subtest-3 | 19.50                                | 18.53  | 18.65  | 18.63  |
| DC-HSDPA Subtest-4 | 19.50                                | 18.55  | 18.65  | 18.61  |
| HSPA+ Subtest-1    | 18.50                                | 17.88  | 18.02  | 18.48  |

Note:

- 1) The conducted power of UMTS B4 is measured with RMS detector.
- 2) Note: Per KDB941225 D01, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.
- 3) The tested channels are marks in bold.
- 4) The power of single channel and double channel is smaller than RMC12.2K, so SAR need not be tested.

### 3. Conducted power measurements of UMTS B5

Down Antenna

| Band               | UMTS B5 Average Conducted Power(dBm) |              |              |              |
|--------------------|--------------------------------------|--------------|--------------|--------------|
| Tx Channel         | Max.                                 | 4132         | 4182         | 4233         |
| Frequency(MHz)     | Tune-up                              | 826.4        | 836.4        | 846.6        |
| AMR Voice          | 24.00                                | <b>22.54</b> | <b>22.62</b> | <b>22.63</b> |
| RMC 12.2K          | 24.00                                | 22.54        | 22.62        | 22.63        |
| HSDPA Subtest-1    | 23.50                                | 21.60        | 21.66        | 21.62        |
| HSDPA Subtest-2    | 23.50                                | 21.56        | 21.60        | 21.59        |
| HSDPA Subtest-3    | 22.50                                | 21.08        | 21.18        | 21.15        |
| HSDPA Subtest-4    | 22.50                                | 21.04        | 21.14        | 21.11        |
| HSUPA Subtest-1    | 22.50                                | 20.56        | 20.51        | 20.68        |
| HSUPA Subtest-2    | 22.50                                | 20.57        | 20.62        | 20.60        |
| HSUPA Subtest-3    | 23.50                                | 21.57        | 21.58        | 21.51        |
| HSUPA Subtest-4    | 22.00                                | 20.18        | 20.27        | 20.21        |
| HSUPA Subtest-5    | 23.50                                | 21.62        | 21.72        | 21.68        |
| DC-HSDPA Subtest-1 | 23.50                                | 21.60        | 21.66        | 21.62        |
| DC-HSDPA Subtest-2 | 23.50                                | 21.56        | 21.60        | 21.59        |
| DC-HSDPA Subtest-3 | 22.50                                | 21.08        | 21.18        | 21.15        |
| DC-HSDPA Subtest-4 | 22.50                                | 21.04        | 21.14        | 21.11        |
| HSPA+ Subtest-1    | 21.50                                | 20.49        | 20.44        | 20.57        |

## Up Antenna

| Band               | UMTS B5 Average Conducted Power(dBm) |       |       |       |
|--------------------|--------------------------------------|-------|-------|-------|
| Tx Channel         | Max.                                 | 4132  | 4182  | 4233  |
| Frequency(MHz)     | Tune-up                              | 826.4 | 836.4 | 846.6 |
| AMR Voice          | 24.00                                | 22.78 | 22.87 | 22.93 |
| RMC 12.2K          | 24.00                                | 22.78 | 22.87 | 22.93 |
| HSDPA Subtest-1    | 23.50                                | 21.78 | 21.86 | 21.83 |
| HSDPA Subtest-2    | 23.50                                | 21.80 | 21.86 | 21.81 |
| HSDPA Subtest-3    | 22.50                                | 21.33 | 21.41 | 21.35 |
| HSDPA Subtest-4    | 22.50                                | 21.29 | 21.39 | 21.34 |
| HSUPA Subtest-1    | 22.50                                | 20.68 | 20.76 | 20.72 |
| HSUPA Subtest-2    | 22.50                                | 20.83 | 20.90 | 20.84 |
| HSUPA Subtest-3    | 23.50                                | 21.55 | 21.62 | 21.61 |
| HSUPA Subtest-4    | 22.00                                | 20.37 | 20.42 | 20.36 |
| HSUPA Subtest-5    | 23.50                                | 21.81 | 21.88 | 21.86 |
| DC-HSDPA Subtest-1 | 23.50                                | 21.78 | 21.86 | 21.83 |
| DC-HSDPA Subtest-2 | 23.50                                | 21.80 | 21.86 | 21.81 |
| DC-HSDPA Subtest-3 | 22.50                                | 21.33 | 21.41 | 21.35 |
| DC-HSDPA Subtest-4 | 22.50                                | 21.29 | 21.39 | 21.34 |
| HSPA+ Subtest-1    | 21.50                                | 20.04 | 20.08 | 20.06 |

## Note:

- 1) The conducted power of UMTS B5 is measured with RMS detector.
- 2) Note: Per KDB941225 D01, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.
- 3) The tested channels are marks in bold.
- 4) The power of single channel and double channel is smaller than RMC12.2K, so SAR need not be tested.
- 5) The receiver on/off power of UMTS B5 Down Antenna and Up Antenna are the same.

### 7.1.3 CONDUCTED POWER MEASUREMENTS OF LTE

#### 1. Conducted power measurement results of LTE B2

Down Antenna Receiver on

| LTE B2/BW=1.4M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=3M |                | Average Conducted Power(dBm) |                        |            |              |
|----------------|----------------|------------------------------|------------------------|------------|--------------|--------------|----------------|------------------------------|------------------------|------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              |
|                |                |                              | 18607/1850.7           | 18900/1880 | 19193/1909.3 |              |                |                              | 18615/1851.5           | 18900/1880 | 19185/1908.5 |
| QPSK           | 1/0            | 24.00                        | 22.95                  | 22.91      | 23.07        | QPSK         | 1/0            | 24.00                        | 23.05                  | 22.96      | 23.03        |
|                | 1/2            | 24.00                        | 23.04                  | 23.01      | 23.17        |              | 1/7            | 24.00                        | 23.22                  | 23.10      | 23.21        |
|                | 1/5            | 24.00                        | 22.93                  | 22.91      | 23.08        |              | 1/14           | 24.00                        | 23.07                  | 22.99      | 23.08        |
|                | 3/0            | 24.00                        | 23.00                  | 22.93      | 23.07        |              | 8/0            | 23.00                        | 22.07                  | 21.93      | 22.09        |
|                | 3/1            | 24.00                        | 23.08                  | 22.98      | 23.11        |              | 8/3            | 23.00                        | 22.11                  | 21.98      | 22.11        |
|                | 3/3            | 24.00                        | 23.06                  | 22.96      | 23.07        |              | 8/7            | 23.00                        | 22.07                  | 21.93      | 22.05        |
|                | 6/0            | 23.00                        | 22.07                  | 21.96      | 22.08        |              | 15/0           | 23.00                        | 22.10                  | 21.94      | 22.07        |
| 16QAM          | 1/0            | 23.00                        | 22.02                  | 21.99      | 22.30        | 16QAM        | 1/0            | 23.00                        | 22.01                  | 22.27      | 22.01        |
|                | 1/2            | 23.00                        | 22.09                  | 22.07      | 22.37        |              | 1/7            | 23.00                        | 22.11                  | 22.42      | 22.15        |
|                | 1/5            | 23.00                        | 22.03                  | 21.98      | 22.31        |              | 1/14           | 23.00                        | 21.95                  | 22.31      | 21.96        |
|                | 3/0            | 23.00                        | 22.16                  | 21.95      | 22.20        |              | 8/0            | 22.00                        | 21.15                  | 21.02      | 21.10        |
|                | 3/1            | 23.00                        | 22.23                  | 22.00      | 22.22        |              | 8/3            | 22.00                        | 21.19                  | 21.04      | 21.12        |
|                | 3/3            | 23.00                        | 22.17                  | 21.96      | 22.19        |              | 8/7            | 22.00                        | 21.14                  | 20.99      | 21.08        |
|                | 6/0            | 22.00                        | 21.20                  | 21.09      | 20.96        |              | 15/0           | 22.00                        | 21.05                  | 20.94      | 21.01        |
| 64QAM          | 1/0            | 22.00                        | 21.08                  | 21.05      | 21.36        | 64QAM        | 1/0            | 22.00                        | 21.27                  | 21.02      | 21.19        |
|                | 1/2            | 22.00                        | 21.23                  | 21.16      | 21.48        |              | 1/7            | 22.00                        | 21.46                  | 21.17      | 21.36        |
|                | 1/5            | 22.00                        | 21.12                  | 21.05      | 21.34        |              | 1/14           | 22.00                        | 21.28                  | 21.12      | 21.13        |
|                | 3/0            | 22.00                        | 21.12                  | 20.86      | 21.33        |              | 8/0            | 21.00                        | 20.10                  | 20.01      | 19.99        |
|                | 3/1            | 22.00                        | 21.15                  | 20.93      | 21.37        |              | 8/3            | 21.00                        | 20.15                  | 20.05      | 20.02        |
|                | 3/3            | 22.00                        | 21.14                  | 20.92      | 21.31        |              | 8/7            | 21.00                        | 20.09                  | 20.00      | 19.96        |
|                | 6/0            | 21.00                        | 20.32                  | 20.02      | 20.02        |              | 15/0           | 21.00                        | 20.03                  | 19.98      | 20.06        |

| LTE B2/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|--------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|              |                |                              | 18625/1852.5           | 18900/1880 | 19175/1907.5 |               |                |                              | 18650/1855             | 18900/1880 | 19150/1905 |
| QPSK         | 1/0            | 24.00                        | 23.07                  | 22.86      | 22.95        | QPSK          | 1/0            | 24.00                        | 23.00                  | 22.95      | 22.96      |
|              | 1/12           | 24.00                        | 23.18                  | 22.99      | 23.16        |               | 1/24           | 24.00                        | 23.20                  | 23.15      | 23.19      |
|              | 1/24           | 24.00                        | 23.04                  | 22.85      | 23.06        |               | 1/49           | 24.00                        | 23.04                  | 22.95      | 23.07      |
|              | 12/0           | 23.00                        | 22.08                  | 21.98      | 22.06        |               | 25/0           | 23.00                        | 22.07                  | 22.02      | 22.06      |
|              | 12/6           | 23.00                        | 22.14                  | 22.01      | 22.13        |               | 25/12          | 23.00                        | 22.11                  | 22.01      | 22.07      |
|              | 12/13          | 23.00                        | 22.09                  | 21.97      | 22.07        |               | 25/25          | 23.00                        | 22.12                  | 21.96      | 22.02      |
|              | 25/0           | 23.00                        | 22.08                  | 21.94      | 22.05        |               | 50/0           | 23.00                        | 22.09                  | 22.01      | 22.06      |
| 16QAM        | 1/0            | 23.00                        | 22.13                  | 22.31      | 22.04        | 16QAM         | 1/0            | 23.00                        | 21.96                  | 22.24      | 21.98      |
|              | 1/12           | 23.00                        | 22.23                  | 22.46      | 22.15        |               | 1/24           | 23.00                        | 22.14                  | 22.43      | 22.16      |
|              | 1/24           | 23.00                        | 22.10                  | 22.33      | 22.00        |               | 1/49           | 23.00                        | 21.92                  | 22.24      | 21.93      |
|              | 12/0           | 22.00                        | 21.09                  | 21.06      | 21.09        |               | 25/0           | 22.00                        | 21.06                  | 21.05      | 21.18      |
|              | 12/6           | 22.00                        | 21.15                  | 21.11      | 21.16        |               | 25/12          | 22.00                        | 21.07                  | 21.02      | 21.19      |
|              | 12/13          | 22.00                        | 21.12                  | 21.09      | 21.12        |               | 25/25          | 22.00                        | 21.08                  | 21.01      | 21.14      |
|              | 25/0           | 22.00                        | 21.06                  | 21.02      | 21.04        |               | 50/0           | 22.00                        | 21.02                  | 21.01      | 21.11      |
| 64QAM        | 1/0            | 22.00                        | 20.85                  | 21.12      | 21.15        | 64QAM         | 1/0            | 22.00                        | 21.27                  | 21.02      | 21.12      |
|              | 1/12           | 22.00                        | 20.95                  | 21.31      | 21.26        |               | 1/24           | 22.00                        | 21.46                  | 21.24      | 21.35      |
|              | 1/24           | 22.00                        | 20.83                  | 21.16      | 21.15        |               | 1/49           | 22.00                        | 21.25                  | 21.05      | 21.12      |
|              | 12/0           | 21.00                        | 20.04                  | 19.90      | 20.10        |               | 25/0           | 21.00                        | 20.11                  | 20.08      | 20.20      |
|              | 12/6           | 21.00                        | 20.12                  | 19.92      | 20.16        |               | 25/12          | 21.00                        | 20.12                  | 20.08      | 20.17      |
|              | 12/13          | 21.00                        | 20.08                  | 19.92      | 20.10        |               | 25/25          | 21.00                        | 20.15                  | 20.04      | 20.08      |
|              | 25/0           | 21.00                        | 20.01                  | 19.92      | 20.04        |               | 50/0           | 21.00                        | 20.10                  | 20.06      | 20.07      |

| LTE B2/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=20M |                | Average Conducted Power(dBm) |                        |            |              |
|---------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|--------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              |
|               |                |                              | 18675/1857.5           | 18900/1880 | 19125/1902.5 |               |                |                              | 18700/1860             | 18900/1880 | 19100/1900   |
| QPSK          | 1/0            | 24.00                        | 22.97                  | 22.89      | 23.00        | QPSK          | 1/0            | 24.00                        | 22.81                  | 22.69      | 22.72        |
|               | 1/37           | 24.00                        | 23.08                  | 23.01      | 23.07        |               | 1/50           | 24.00                        | <b>23.23</b>           | 23.01      | 23.17        |
|               | 1/74           | 24.00                        | 22.90                  | 22.87      | 23.06        |               | 1/99           | 24.00                        | 22.74                  | 22.66      | 22.52        |
|               | 36/0           | 23.00                        | 22.11                  | 22.87      | 22.10        |               | 50/0           | 23.00                        | 21.97                  | 21.99      | 21.88        |
|               | 36/19          | 23.00                        | 22.11                  | 22.03      | 22.11        |               | 50/25          | 23.00                        | 22.06                  | 22.00      | <b>22.07</b> |
|               | 36/39          | 23.00                        | 22.11                  | 21.98      | 22.11        |               | 50/50          | 23.00                        | 22.01                  | 21.86      | 21.78        |
|               | 75/0           | 23.00                        | 22.12                  | 22.01      | 22.15        |               | 100/0          | 23.00                        | 22.00                  | 21.94      | 21.83        |
| 16QAM         | 1/0            | 23.00                        | 21.88                  | 22.19      | 22.35        | 16QAM         | 1/0            | 23.00                        | 22.25                  | 22.11      | 22.06        |
|               | 1/37           | 23.00                        | 21.97                  | 22.31      | 22.43        |               | 1/50           | 23.00                        | 22.63                  | 22.52      | 22.51        |
|               | 1/74           | 23.00                        | 21.81                  | 22.17      | 22.22        |               | 1/99           | 23.00                        | 22.19                  | 22.08      | 22.06        |
|               | 36/0           | 22.00                        | 21.03                  | 21.17      | 21.04        |               | 50/0           | 22.00                        | 20.98                  | 21.01      | 21.02        |
|               | 36/19          | 22.00                        | 21.03                  | 21.05      | 21.04        |               | 50/25          | 22.00                        | 21.06                  | 20.98      | 21.06        |
|               | 36/39          | 22.00                        | 21.05                  | 20.98      | 21.05        |               | 50/50          | 22.00                        | 20.92                  | 20.89      | 20.92        |
|               | 75/0           | 22.00                        | 21.03                  | 21.00      | 21.11        |               | 100/0          | 22.00                        | 21.00                  | 20.95      | 21.01        |
| 64QAM         | 1/0            | 22.00                        | 21.20                  | 20.94      | 21.54        | 64QAM         | 1/0            | 22.00                        | 20.92                  | 20.98      | 21.33        |
|               | 1/37           | 22.00                        | 21.31                  | 21.09      | 21.60        |               | 1/50           | 22.00                        | 21.31                  | 20.95      | 21.79        |
|               | 1/74           | 22.00                        | 21.15                  | 20.99      | 21.51        |               | 1/99           | 22.00                        | 20.83                  | 21.03      | 21.35        |
|               | 36/0           | 21.00                        | 20.09                  | 20.99      | 20.09        |               | 50/0           | 21.00                        | 19.97                  | 20.06      | 20.13        |
|               | 36/19          | 21.00                        | 20.09                  | 20.07      | 20.10        |               | 50/25          | 21.00                        | 20.04                  | 20.05      | 20.16        |
|               | 36/39          | 21.00                        | 20.11                  | 20.04      | 20.06        |               | 50/50          | 21.00                        | 19.95                  | 19.94      | 20.01        |
|               | 75/0           | 21.00                        | 20.07                  | 20.05      | 20.18        |               | 100/0          | 21.00                        | 20.00                  | 19.98      | 20.05        |

Down Antenna Receiver off

| LTE B2/BW=1.4M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=3M |                | Average Conducted Power(dBm) |                        |            |              |
|----------------|----------------|------------------------------|------------------------|------------|--------------|--------------|----------------|------------------------------|------------------------|------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              |
|                |                |                              | 18607/1850.7           | 18900/1880 | 19193/1909.3 |              |                |                              | 18615/1851.5           | 18900/1880 | 19185/1908.5 |
| QPSK           | 1/0            | 20.50                        | 19.52                  | 19.52      | 19.90        | QPSK         | 1/0            | 20.50                        | 19.53                  | 19.83      | 19.62        |
|                | 1/2            | 20.50                        | 19.61                  | 19.65      | 20.01        |              | 1/7            | 20.50                        | 19.65                  | 19.62      | 19.77        |
|                | 1/5            | 20.50                        | 19.52                  | 19.57      | 19.94        |              | 1/14           | 20.50                        | 19.48                  | 19.86      | 19.58        |
|                | 3/0            | 20.50                        | 19.78                  | 19.54      | 19.80        |              | 8/0            | 20.50                        | 19.69                  | 19.59      | 19.66        |
|                | 3/1            | 20.50                        | 19.84                  | 19.57      | 19.82        |              | 8/3            | 20.50                        | 19.74                  | 19.62      | 19.68        |
|                | 3/3            | 20.50                        | 19.81                  | 19.58      | 19.79        |              | 8/7            | 20.50                        | 19.69                  | 19.57      | 19.64        |
|                | 6/0            | 20.50                        | 19.73                  | 19.65      | 19.53        |              | 15/0           | 20.50                        | 19.66                  | 19.53      | 19.59        |
| 16QAM          | 1/0            | 20.50                        | 19.43                  | 19.44      | 19.58        | 16QAM        | 1/0            | 20.50                        | 19.52                  | 19.49      | 19.54        |
|                | 1/2            | 20.50                        | 19.57                  | 19.55      | 19.74        |              | 1/7            | 20.50                        | 19.69                  | 19.68      | 19.71        |
|                | 1/5            | 20.50                        | 19.45                  | 19.43      | 19.59        |              | 1/14           | 20.50                        | 19.54                  | 19.53      | 19.55        |
|                | 3/0            | 20.50                        | 19.60                  | 19.51      | 19.66        |              | 8/0            | 20.50                        | 19.61                  | 19.51      | 19.63        |
|                | 3/1            | 20.50                        | 19.65                  | 19.52      | 19.72        |              | 8/3            | 20.50                        | 19.62                  | 19.54      | 19.66        |
|                | 3/3            | 20.50                        | 19.67                  | 19.50      | 19.67        |              | 8/7            | 20.50                        | 19.60                  | 19.47      | 19.62        |
|                | 6/0            | 20.50                        | 19.57                  | 19.49      | 19.65        |              | 15/0           | 20.50                        | 19.63                  | 19.47      | 19.61        |
| 64QAM          | 1/0            | 20.50                        | 19.67                  | 19.80      | 19.68        | 64QAM        | 1/0            | 20.50                        | 19.72                  | 19.77      | 19.69        |
|                | 1/2            | 20.50                        | 19.78                  | 19.94      | 19.81        |              | 1/7            | 20.50                        | 19.90                  | 19.91      | 19.89        |
|                | 1/5            | 20.50                        | 19.72                  | 19.81      | 19.68        |              | 1/14           | 20.50                        | 19.63                  | 19.77      | 19.77        |
|                | 3/0            | 20.50                        | 19.55                  | 19.79      | 19.74        |              | 8/0            | 20.50                        | 19.52                  | 19.55      | 19.68        |
|                | 3/1            | 20.50                        | 19.59                  | 19.84      | 19.78        |              | 8/3            | 20.50                        | 19.55                  | 19.57      | 19.73        |
|                | 3/3            | 20.50                        | 19.56                  | 19.79      | 19.75        |              | 8/7            | 20.50                        | 19.54                  | 19.50      | 19.67        |
|                | 6/0            | 20.50                        | 19.62                  | 19.46      | 19.89        |              | 15/0           | 20.50                        | 19.63                  | 19.46      | 19.64        |

| LTE B2/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|--------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|              |                |                              | 18625/1852.5           | 18900/1880 | 19175/1907.5 |               |                |                              | 18650/1855             | 18900/1880 | 19150/1905 |
| QPSK         | 1/0            | 20.50                        | 19.62                  | 19.56      | 19.82        | QPSK          | 1/0            | 20.50                        | 19.48                  | 19.80      | 19.56      |
|              | 1/12           | 20.50                        | 19.77                  | 19.67      | 19.96        |               | 1/24           | 20.50                        | 19.64                  | 20.01      | 19.76      |
|              | 1/24           | 20.50                        | 19.65                  | 19.55      | 19.80        |               | 1/49           | 20.50                        | 19.48                  | 19.83      | 19.57      |
|              | 12/0           | 20.50                        | 19.62                  | 19.54      | 19.75        |               | 25/0           | 20.50                        | 19.63                  | 19.61      | 19.77      |
|              | 12/6           | 20.50                        | 19.72                  | 19.59      | 19.82        |               | 25/12          | 20.50                        | 19.64                  | 19.57      | 19.75      |
|              | 12/13          | 20.50                        | 19.68                  | 19.57      | 19.74        |               | 25/25          | 20.50                        | 19.67                  | 19.56      | 19.69      |
|              | 25/0           | 20.50                        | 19.61                  | 19.49      | 19.69        |               | 50/0           | 20.50                        | 19.64                  | 19.59      | 19.69      |
| 16QAM        | 1/0            | 20.50                        | 19.55                  | 19.39      | 19.54        | 16QAM         | 1/0            | 20.50                        | 19.48                  | 19.41      | 19.49      |
|              | 1/12           | 20.50                        | 19.65                  | 19.53      | 19.74        |               | 1/24           | 20.50                        | 19.67                  | 19.61      | 19.67      |
|              | 1/24           | 20.50                        | 19.53                  | 19.42      | 19.58        |               | 1/49           | 20.50                        | 19.52                  | 19.42      | 19.56      |
|              | 12/0           | 20.50                        | 19.57                  | 19.50      | 19.65        |               | 25/0           | 20.50                        | 19.60                  | 19.55      | 19.61      |
|              | 12/6           | 20.50                        | 19.65                  | 19.55      | 19.71        |               | 25/12          | 20.50                        | 19.64                  | 19.51      | 19.65      |
|              | 12/13          | 20.50                        | 19.63                  | 19.52      | 19.66        |               | 25/25          | 20.50                        | 19.64                  | 19.49      | 19.60      |
|              | 25/0           | 20.50                        | 19.61                  | 19.49      | 19.64        |               | 50/0           | 20.50                        | 19.64                  | 19.54      | 19.65      |
| 64QAM        | 1/0            | 20.50                        | 19.43                  | 19.70      | 19.68        | 64QAM         | 1/0            | 20.50                        | 19.64                  | 19.73      | 19.65      |
|              | 1/12           | 20.50                        | 19.54                  | 19.84      | 19.87        |               | 1/24           | 20.50                        | 19.84                  | 19.92      | 19.87      |
|              | 1/24           | 20.50                        | 19.45                  | 19.70      | 19.72        |               | 1/49           | 20.50                        | 19.65                  | 19.72      | 19.67      |
|              | 12/0           | 20.50                        | 19.66                  | 19.45      | 19.63        |               | 25/0           | 20.50                        | 19.67                  | 19.60      | 19.74      |
|              | 12/6           | 20.50                        | 19.71                  | 19.47      | 19.71        |               | 25/12          | 20.50                        | 19.67                  | 19.60      | 19.71      |
|              | 12/13          | 20.50                        | 19.67                  | 19.46      | 19.67        |               | 25/25          | 20.50                        | 19.69                  | 19.57      | 19.66      |
|              | 25/0           | 20.50                        | 19.59                  | 19.46      | 19.63        |               | 50/0           | 20.50                        | 19.60                  | 19.58      | 19.68      |

| LTE B2/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=20M |                | Average Conducted Power(dBm) |                        |            |              |
|---------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|--------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              |
|               |                |                              | 18675/1857.5           | 18900/1880 | 19125/1902.5 |               |                |                              | 18700/1860             | 18900/1880 | 19100/1900   |
| QPSK          | 1/0            | 20.50                        | 19.42                  | 19.77      | 19.45        | QPSK          | 1/0            | 20.50                        | 19.64                  | 19.82      | 19.49        |
|               | 1/37           | 20.50                        | 19.51                  | 19.88      | 19.54        |               | 1/50           | 20.50                        | <b>20.04</b>           | 19.88      | 19.92        |
|               | 1/74           | 20.50                        | 19.37                  | 19.79      | 19.43        |               | 1/99           | 20.50                        | 19.56                  | 19.84      | 19.53        |
|               | 36/0           | 20.50                        | 19.59                  | 19.79      | 19.64        |               | 50/0           | 20.50                        | 19.58                  | 19.57      | 19.69        |
|               | 36/19          | 20.50                        | 19.59                  | 19.61      | 19.61        |               | 50/25          | 20.50                        | 19.67                  | 19.56      | <b>19.72</b> |
|               | 36/39          | 20.50                        | 19.60                  | 19.58      | 19.61        |               | 50/50          | 20.50                        | 19.58                  | 19.47      | 19.59        |
|               | 75/0           | 20.50                        | 19.60                  | 19.58      | 19.65        |               | 100/0          | 20.50                        | 19.58                  | 19.50      | 19.64        |
| 16QAM         | 1/0            | 20.50                        | 19.43                  | 19.44      | 19.53        | 16QAM         | 1/0            | 20.50                        | 19.82                  | 19.71      | 19.72        |
|               | 1/37           | 20.50                        | 19.53                  | 19.54      | 19.60        |               | 1/50           | 20.50                        | 19.62                  | 19.57      | 19.58        |
|               | 1/74           | 20.50                        | 19.40                  | 19.40      | 19.58        |               | 1/99           | 20.50                        | 19.78                  | 19.74      | 19.75        |
|               | 36/0           | 20.50                        | 19.61                  | 19.40      | 19.61        |               | 50/0           | 20.50                        | 19.57                  | 19.58      | 19.63        |
|               | 36/19          | 20.50                        | 19.62                  | 19.57      | 19.64        |               | 50/25          | 20.50                        | 19.67                  | 19.57      | 19.70        |
|               | 36/39          | 20.50                        | 19.65                  | 19.53      | 19.66        |               | 50/50          | 20.50                        | 19.57                  | 19.49      | 19.56        |
|               | 75/0           | 20.50                        | 19.61                  | 19.53      | 19.66        |               | 100/0          | 20.50                        | 19.58                  | 19.53      | 19.64        |
| 64QAM         | 1/0            | 20.50                        | 19.76                  | 19.54      | 19.81        | 64QAM         | 1/0            | 20.50                        | 19.26                  | 19.25      | 19.25        |
|               | 1/37           | 20.50                        | 19.85                  | 19.65      | 19.93        |               | 1/50           | 20.50                        | 19.67                  | 19.47      | 19.66        |
|               | 1/74           | 20.50                        | 19.72                  | 19.54      | 19.77        |               | 1/99           | 20.50                        | 19.23                  | 19.25      | 19.36        |
|               | 36/0           | 20.50                        | 19.64                  | 19.54      | 19.61        |               | 50/0           | 20.50                        | 19.48                  | 19.57      | 19.61        |
|               | 36/19          | 20.50                        | 19.61                  | 19.63      | 19.63        |               | 50/25          | 20.50                        | 19.58                  | 19.55      | 19.67        |
|               | 36/39          | 20.50                        | 19.61                  | 19.57      | 19.61        |               | 50/50          | 20.50                        | 19.47                  | 19.45      | 19.55        |
|               | 75/0           | 20.50                        | 19.61                  | 19.54      | 19.68        |               | 100/0          | 20.50                        | 19.49                  | 19.50      | 19.60        |

Up Antenna Receiver on

| LTE B2/BW=1.4M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=3M |                | Average Conducted Power(dBm) |                        |            |              |
|----------------|----------------|------------------------------|------------------------|------------|--------------|--------------|----------------|------------------------------|------------------------|------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              |
|                |                |                              | 18607/1850.7           | 18900/1880 | 19193/1909.3 |              |                |                              | 18615/1851.5           | 18900/1880 | 19185/1908.5 |
| QPSK           | 1/0            | 17.00                        | 16.41                  | 16.32      | 16.46        | QPSK         | 1/0            | 17.00                        | 16.43                  | 16.42      | 16.39        |
|                | 1/2            | 17.00                        | 16.57                  | 16.45      | 16.54        |              | 1/7            | 17.00                        | 16.62                  | 16.55      | 16.57        |
|                | 1/5            | 17.00                        | 16.44                  | 16.31      | 16.46        |              | 1/14           | 17.00                        | 16.46                  | 16.41      | 16.40        |
|                | 3/0            | 17.00                        | 16.53                  | 16.38      | 16.44        |              | 8/0            | 17.00                        | 16.50                  | 16.36      | 16.46        |
|                | 3/1            | 17.00                        | 16.59                  | 16.39      | 16.52        |              | 8/3            | 17.00                        | 16.55                  | 16.41      | 16.49        |
|                | 3/3            | 17.00                        | 16.57                  | 16.36      | 16.44        |              | 8/7            | 17.00                        | 16.49                  | 16.34      | 16.44        |
|                | 6/0            | 17.00                        | 16.54                  | 16.39      | 16.47        |              | 15/0           | 17.00                        | 16.52                  | 16.34      | 16.43        |
| 16QAM          | 1/0            | 17.00                        | 16.51                  | 16.41      | 16.78        | 16QAM        | 1/0            | 17.00                        | 16.49                  | 16.68      | 16.48        |
|                | 1/2            | 17.00                        | 16.58                  | 16.52      | 16.37        |              | 1/7            | 17.00                        | 16.59                  | 16.67      | 16.69        |
|                | 1/5            | 17.00                        | 16.50                  | 16.41      | 16.78        |              | 1/14           | 17.00                        | 16.38                  | 16.75      | 16.44        |
|                | 3/0            | 17.00                        | 16.66                  | 16.37      | 16.65        |              | 8/0            | 17.00                        | 16.59                  | 16.44      | 16.50        |
|                | 3/1            | 17.00                        | 16.74                  | 16.40      | 16.70        |              | 8/3            | 17.00                        | 16.63                  | 16.47      | 16.54        |
|                | 3/3            | 17.00                        | 16.67                  | 16.36      | 16.68        |              | 8/7            | 17.00                        | 16.60                  | 16.42      | 16.49        |
|                | 6/0            | 17.00                        | 16.68                  | 16.52      | 16.40        |              | 15/0           | 17.00                        | 16.52                  | 16.34      | 16.41        |
| 64QAM          | 1/0            | 17.00                        | 16.44                  | 16.41      | 16.60        | 64QAM        | 1/0            | 17.00                        | 16.80                  | 16.46      | 16.66        |
|                | 1/2            | 17.00                        | 16.64                  | 16.57      | 16.68        |              | 1/7            | 17.00                        | 16.54                  | 16.64      | 16.80        |
|                | 1/5            | 17.00                        | 16.49                  | 16.44      | 16.59        |              | 1/14           | 17.00                        | 16.76                  | 16.54      | 16.58        |
|                | 3/0            | 17.00                        | 16.63                  | 16.46      | 16.40        |              | 8/0            | 17.00                        | 16.57                  | 16.40      | 16.42        |
|                | 3/1            | 17.00                        | 16.66                  | 16.51      | 16.44        |              | 8/3            | 17.00                        | 16.59                  | 16.45      | 16.45        |
|                | 3/3            | 17.00                        | 16.70                  | 16.47      | 16.42        |              | 8/7            | 17.00                        | 16.55                  | 16.40      | 16.42        |
|                | 6/0            | 17.00                        | 16.51                  | 16.66      | 16.56        |              | 15/0           | 17.00                        | 16.50                  | 16.37      | 16.48        |

| LTE B2/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|--------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|              |                |                              | 18625/1852.5           | 18900/1880 | 19175/1907.5 |               |                |                              | 18650/1855             | 18900/1880 | 19150/1905 |
| QPSK         | 1/0            | 17.00                        | 16.46                  | 16.27      | 16.36        | QPSK          | 1/0            | 17.00                        | 16.39                  | 16.39      | 16.34      |
|              | 1/12           | 17.00                        | 16.59                  | 16.42      | 16.52        |               | 1/24           | 17.00                        | 16.61                  | 16.60      | 16.54      |
|              | 1/24           | 17.00                        | 16.41                  | 16.26      | 16.39        |               | 1/49           | 17.00                        | 16.40                  | 16.41      | 16.40      |
|              | 12/0           | 17.00                        | 16.43                  | 16.35      | 16.41        |               | 25/0           | 17.00                        | 16.46                  | 16.40      | 16.42      |
|              | 12/6           | 17.00                        | 16.53                  | 16.42      | 16.52        |               | 25/12          | 17.00                        | 16.51                  | 16.39      | 16.45      |
|              | 12/13          | 17.00                        | 16.48                  | 16.35      | 16.46        |               | 25/25          | 17.00                        | 16.46                  | 16.30      | 16.37      |
|              | 25/0           | 17.00                        | 16.45                  | 16.31      | 16.40        |               | 50/0           | 17.00                        | 16.45                  | 16.36      | 16.40      |
| 16QAM        | 1/0            | 17.00                        | 16.58                  | 16.77      | 16.53        | 16QAM         | 1/0            | 17.00                        | 16.39                  | 16.67      | 16.44      |
|              | 1/12           | 17.00                        | 16.69                  | 16.60      | 16.64        |               | 1/24           | 17.00                        | 16.60                  | 16.68      | 16.64      |
|              | 1/24           | 17.00                        | 16.55                  | 16.77      | 16.49        |               | 1/49           | 17.00                        | 16.33                  | 16.69      | 16.45      |
|              | 12/0           | 17.00                        | 16.48                  | 16.45      | 16.49        |               | 25/0           | 17.00                        | 16.48                  | 16.42      | 16.55      |
|              | 12/6           | 17.00                        | 16.60                  | 16.51      | 16.59        |               | 25/12          | 17.00                        | 16.52                  | 16.45      | 16.59      |
|              | 12/13          | 17.00                        | 16.55                  | 16.49      | 16.53        |               | 25/25          | 17.00                        | 16.48                  | 16.42      | 16.56      |
|              | 25/0           | 17.00                        | 16.47                  | 16.37      | 16.42        |               | 50/0           | 17.00                        | 16.42                  | 16.41      | 16.51      |
| 64QAM        | 1/0            | 17.00                        | 16.36                  | 16.55      | 16.59        | 64QAM         | 1/0            | 17.00                        | 16.72                  | 16.45      | 16.60      |
|              | 1/12           | 17.00                        | 16.44                  | 16.67      | 16.72        |               | 1/24           | 17.00                        | 16.64                  | 16.65      | 16.78      |
|              | 1/24           | 17.00                        | 16.30                  | 16.56      | 16.60        |               | 1/49           | 17.00                        | 16.31                  | 16.47      | 16.59      |
|              | 12/0           | 17.00                        | 16.47                  | 16.26      | 16.46        |               | 25/0           | 17.00                        | 16.53                  | 16.47      | 16.56      |
|              | 12/6           | 17.00                        | 16.55                  | 16.33      | 16.57        |               | 25/12          | 17.00                        | 16.55                  | 16.49      | 16.56      |
|              | 12/13          | 17.00                        | 16.53                  | 16.31      | 16.53        |               | 25/25          | 17.00                        | 16.52                  | 16.45      | 16.55      |
|              | 25/0           | 17.00                        | 16.43                  | 16.27      | 16.49        |               | 50/0           | 17.00                        | 16.48                  | 16.46      | 16.48      |

| LTE B2/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=20M |                | Average Conducted Power(dBm) |                        |            |              |
|---------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|--------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              |
|               |                |                              | 18675/1857.5           | 18900/1880 | 19125/1902.5 |               |                |                              | 18700/1860             | 18900/1880 | 19100/1900   |
| QPSK          | 1/0            | 17.00                        | 16.35                  | 16.31      | 16.36        | QPSK          | 1/0            | 17.00                        | 16.42                  | 16.29      | 16.28        |
|               | 1/37           | 17.00                        | 16.44                  | 16.43      | 16.42        |               | 1/50           | 17.00                        | <b>16.82</b>           | 16.59      | 16.71        |
|               | 1/74           | 17.00                        | 16.28                  | 16.33      | 16.33        |               | 1/99           | 17.00                        | 16.35                  | 16.30      | 16.37        |
|               | 36/0           | 17.00                        | 16.47                  | 16.33      | 16.42        |               | 50/0           | 17.00                        | 16.40                  | 16.43      | 16.45        |
|               | 36/19          | 17.00                        | 16.51                  | 16.40      | 16.41        |               | 50/25          | 17.00                        | 16.45                  | 16.37      | <b>16.47</b> |
|               | 36/39          | 17.00                        | 16.51                  | 16.34      | 16.45        |               | 50/50          | 17.00                        | 16.39                  | 16.26      | 16.41        |
|               | 75/0           | 17.00                        | 16.44                  | 16.34      | 16.42        |               | 100/0          | 17.00                        | 16.43                  | 16.36      | 16.46        |
| 16QAM         | 1/0            | 17.00                        | 16.35                  | 16.63      | 16.49        | 16QAM         | 1/0            | 17.00                        | 16.73                  | 16.58      | 16.67        |
|               | 1/37           | 17.00                        | 16.43                  | 16.74      | 16.69        |               | 1/50           | 17.00                        | 16.42                  | 16.39      | 16.51        |
|               | 1/74           | 17.00                        | 16.34                  | 16.64      | 16.72        |               | 1/99           | 17.00                        | 16.64                  | 16.59      | 16.70        |
|               | 36/0           | 17.00                        | 16.47                  | 16.64      | 16.46        |               | 50/0           | 17.00                        | 16.43                  | 16.39      | 16.53        |
|               | 36/19          | 17.00                        | 16.46                  | 16.43      | 16.43        |               | 50/25          | 17.00                        | 16.49                  | 16.37      | 16.54        |
|               | 36/39          | 17.00                        | 16.43                  | 16.40      | 16.45        |               | 50/50          | 17.00                        | 16.39                  | 16.28      | 16.47        |
|               | 75/0           | 17.00                        | 16.45                  | 16.39      | 16.47        |               | 100/0          | 17.00                        | 16.47                  | 16.35      | 16.51        |
| 64QAM         | 1/0            | 17.00                        | 16.69                  | 16.42      | 16.70        | 64QAM         | 1/0            | 17.00                        | 16.54                  | 16.74      | 16.36        |
|               | 1/37           | 17.00                        | 16.77                  | 16.51      | 16.56        |               | 1/50           | 17.00                        | 16.48                  | 16.43      | 16.33        |
|               | 1/74           | 17.00                        | 16.66                  | 16.38      | 16.33        |               | 1/99           | 17.00                        | 16.41                  | 16.75      | 16.41        |
|               | 36/0           | 17.00                        | 16.49                  | 16.38      | 16.45        |               | 50/0           | 17.00                        | 16.43                  | 16.42      | 16.50        |
|               | 36/19          | 17.00                        | 16.53                  | 16.42      | 16.46        |               | 50/25          | 17.00                        | 16.52                  | 16.40      | 16.56        |
|               | 36/39          | 17.00                        | 16.49                  | 16.40      | 16.48        |               | 50/50          | 17.00                        | 16.43                  | 16.31      | 16.46        |
|               | 75/0           | 17.00                        | 16.45                  | 16.39      | 16.51        |               | 100/0          | 17.00                        | 16.43                  | 16.35      | 16.51        |

Up Antenna Receiver off

| LTE B2/BW=1.4M  |                       | Average Conducted Power(dBm) |                        |                |                  | LTE B2/BW=3M    |                       | Average Conducted Power(dBm) |                        |                |                  |
|-----------------|-----------------------|------------------------------|------------------------|----------------|------------------|-----------------|-----------------------|------------------------------|------------------------|----------------|------------------|
| Modula<br>-tion | RB<br>Size/<br>Offset | Max.<br>Tune-up              | Channel/Frequency(MHz) |                |                  | Modula<br>-tion | RB<br>Size/<br>Offset | Max.<br>Tune-up              | Channel/Frequency(MHz) |                |                  |
|                 |                       |                              | 18607/<br>1850.7       | 18900/<br>1880 | 19193/<br>1909.3 |                 |                       |                              | 18615/<br>1851.5       | 18900/<br>1880 | 19185/<br>1908.5 |
| QPSK            | 1/0                   | 20.50                        | 19.89                  | 19.83          | 19.83            | QPSK            | 1/0                   | 20.50                        | 19.90                  | 19.89          | 19.90            |
|                 | 1/2                   | 20.50                        | 19.99                  | 19.90          | 19.97            |                 | 1/7                   | 20.50                        | 20.09                  | 20.03          | 20.07            |
|                 | 1/5                   | 20.50                        | 19.86                  | 19.81          | 19.86            |                 | 1/14                  | 20.50                        | 19.94                  | 19.88          | 19.89            |
|                 | 3/0                   | 20.50                        | 19.97                  | 19.89          | 19.96            |                 | 8/0                   | 20.50                        | 20.00                  | 19.85          | 19.95            |
|                 | 3/1                   | 20.50                        | 20.04                  | 19.95          | 20.01            |                 | 8/3                   | 20.50                        | 20.01                  | 19.89          | 20.00            |
|                 | 3/3                   | 20.50                        | 20.00                  | 19.89          | 20.02            |                 | 8/7                   | 20.50                        | 19.97                  | 19.83          | 19.97            |
|                 | 6/0                   | 20.50                        | 19.94                  | 19.83          | 19.96            |                 | 15/0                  | 20.50                        | 20.01                  | 19.83          | 19.97            |
| 16QAM           | 1/0                   | 20.50                        | 19.92                  | 19.81          | 20.20            | 16QAM           | 1/0                   | 20.50                        | 19.99                  | 19.78          | 20.26            |
|                 | 1/2                   | 20.50                        | 20.04                  | 19.89          | 20.30            |                 | 1/7                   | 20.50                        | 20.14                  | 19.90          | 20.14            |
|                 | 1/5                   | 20.50                        | 19.95                  | 19.85          | 20.22            |                 | 1/14                  | 20.50                        | 19.90                  | 19.74          | 20.29            |
|                 | 3/0                   | 20.50                        | 20.20                  | 20.02          | 20.12            |                 | 8/0                   | 20.50                        | 20.00                  | 19.97          | 20.04            |
|                 | 3/1                   | 20.50                        | 20.25                  | 20.07          | 20.14            |                 | 8/3                   | 20.50                        | 20.03                  | 19.99          | 20.04            |
|                 | 3/3                   | 20.50                        | 20.21                  | 20.04          | 20.12            |                 | 8/7                   | 20.50                        | 20.02                  | 19.94          | 19.94            |
|                 | 6/0                   | 20.50                        | 20.16                  | 20.00          | 19.84            |                 | 15/0                  | 20.50                        | 19.95                  | 19.88          | 19.99            |
| 64QAM           | 1/0                   | 20.50                        | 19.99                  | 19.89          | 20.22            | 64QAM           | 1/0                   | 20.50                        | 20.28                  | 19.94          | 20.06            |
|                 | 1/2                   | 20.50                        | 20.16                  | 20.02          | 20.16            |                 | 1/7                   | 20.50                        | 20.14                  | 20.11          | 20.25            |
|                 | 1/5                   | 20.50                        | 19.98                  | 19.96          | 20.22            |                 | 1/14                  | 20.50                        | 20.25                  | 19.99          | 20.02            |
|                 | 3/0                   | 20.50                        | 20.10                  | 19.79          | 20.21            |                 | 8/0                   | 20.50                        | 20.06                  | 19.89          | 19.90            |
|                 | 3/1                   | 20.50                        | 20.13                  | 19.83          | 20.24            |                 | 8/3                   | 20.50                        | 20.09                  | 19.93          | 19.90            |
|                 | 3/3                   | 20.50                        | 20.14                  | 19.83          | 20.18            |                 | 8/7                   | 20.50                        | 20.03                  | 19.89          | 19.86            |
|                 | 6/0                   | 20.50                        | 20.22                  | 19.91          | 19.90            |                 | 15/0                  | 20.50                        | 20.00                  | 19.86          | 19.97            |

| LTE B2/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|--------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|              |                |                              | 18625/1852.5           | 18900/1880 | 19175/1907.5 |               |                |                              | 18650/1855             | 18900/1880 | 19150/1905 |
| QPSK         | 1/0            | 20.50                        | 19.92                  | 19.74      | 19.85        | QPSK          | 1/0            | 20.50                        | 19.90                  | 19.85      | 19.83      |
|              | 1/12           | 20.50                        | 20.06                  | 19.91      | 20.03        |               | 1/24           | 20.50                        | 20.06                  | 20.04      | 20.04      |
|              | 1/24           | 20.50                        | 19.95                  | 19.74      | 19.87        |               | 1/49           | 20.50                        | 19.86                  | 19.83      | 19.88      |
|              | 12/0           | 20.50                        | 19.96                  | 19.86      | 19.96        |               | 25/0           | 20.50                        | 19.99                  | 19.91      | 19.97      |
|              | 12/6           | 20.50                        | 20.04                  | 19.90      | 20.02        |               | 25/12          | 20.50                        | 20.01                  | 19.88      | 19.95      |
|              | 12/13          | 20.50                        | 19.98                  | 19.88      | 19.98        |               | 25/25          | 20.50                        | 20.04                  | 19.86      | 19.94      |
|              | 25/0           | 20.50                        | 19.99                  | 19.87      | 19.95        |               | 50/0           | 20.50                        | 20.04                  | 19.92      | 19.98      |
| 16QAM        | 1/0            | 20.50                        | 20.04                  | 20.23      | 19.90        | 16QAM         | 1/0            | 20.50                        | 19.89                  | 20.15      | 19.92      |
|              | 1/12           | 20.50                        | 20.20                  | 20.19      | 20.05        |               | 1/24           | 20.50                        | 20.05                  | 20.26      | 20.09      |
|              | 1/24           | 20.50                        | 20.05                  | 20.24      | 19.93        |               | 1/49           | 20.50                        | 19.87                  | 20.17      | 19.90      |
|              | 12/0           | 20.50                        | 20.04                  | 19.98      | 19.99        |               | 25/0           | 20.50                        | 20.03                  | 19.96      | 20.09      |
|              | 12/6           | 20.50                        | 20.13                  | 20.02      | 20.05        |               | 25/12          | 20.50                        | 20.05                  | 19.94      | 20.08      |
|              | 12/13          | 20.50                        | 20.08                  | 19.99      | 19.99        |               | 25/25          | 20.50                        | 20.09                  | 19.93      | 20.03      |
|              | 25/0           | 20.50                        | 20.02                  | 19.93      | 19.90        |               | 50/0           | 20.50                        | 20.02                  | 19.95      | 20.01      |
| 64QAM        | 1/0            | 20.50                        | 19.80                  | 20.04      | 20.04        | 64QAM         | 1/0            | 20.50                        | 20.21                  | 19.93      | 20.02      |
|              | 1/12           | 20.50                        | 19.94                  | 20.18      | 20.20        |               | 1/24           | 20.50                        | 20.10                  | 20.15      | 20.22      |
|              | 1/24           | 20.50                        | 19.82                  | 20.04      | 20.04        |               | 1/49           | 20.50                        | 20.19                  | 19.93      | 20.03      |
|              | 12/0           | 20.50                        | 20.00                  | 19.80      | 19.98        |               | 25/0           | 20.50                        | 20.04                  | 20.00      | 20.07      |
|              | 12/6           | 20.50                        | 20.08                  | 19.84      | 20.03        |               | 25/12          | 20.50                        | 20.06                  | 19.97      | 20.07      |
|              | 12/13          | 20.50                        | 20.04                  | 19.80      | 20.00        |               | 25/25          | 20.50                        | 20.09                  | 19.96      | 20.01      |
|              | 25/0           | 20.50                        | 19.97                  | 19.80      | 19.97        |               | 50/0           | 20.50                        | 20.05                  | 19.95      | 19.98      |

| LTE B2/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B2/BW=20M |                | Average Conducted Power(dBm) |                        |            |              |
|---------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|--------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              |
|               |                |                              | 18675/1857.5           | 18900/1880 | 19125/1902.5 |               |                |                              | 18700/1860             | 18900/1880 | 19100/1900   |
| QPSK          | 1/0            | 20.50                        | 19.81                  | 19.81      | 19.86        | QPSK          | 1/0            | 20.50                        | 19.89                  | 19.84      | 19.85        |
|               | 1/37           | 20.50                        | 19.93                  | 19.90      | 19.94        |               | 1/50           | 20.50                        | <b>20.35</b>           | 20.12      | 20.28        |
|               | 1/74           | 20.50                        | 19.79                  | 19.75      | 19.87        |               | 1/99           | 20.50                        | 19.83                  | 19.82      | 19.97        |
|               | 36/0           | 20.50                        | 19.98                  | 19.75      | 19.95        |               | 50/0           | 20.50                        | 20.10                  | 20.14      | 20.22        |
|               | 36/19          | 20.50                        | 20.02                  | 19.92      | 19.99        |               | 50/25          | 20.50                        | 20.20                  | 20.06      | <b>20.25</b> |
|               | 36/39          | 20.50                        | 20.02                  | 19.88      | 19.97        |               | 50/50          | 20.50                        | 20.12                  | 19.98      | 20.13        |
|               | 75/0           | 20.50                        | 19.97                  | 19.90      | 19.97        |               | 100/0          | 20.50                        | 20.12                  | 20.08      | 20.17        |
| 16QAM         | 1/0            | 20.50                        | 19.82                  | 20.12      | 20.31        | 16QAM         | 1/0            | 20.50                        | 20.19                  | 20.08      | 20.03        |
|               | 1/37           | 20.50                        | 19.90                  | 20.22      | 20.28        |               | 1/50           | 20.50                        | 20.18                  | 19.95      | 20.16        |
|               | 1/74           | 20.50                        | 19.78                  | 20.10      | 20.22        |               | 1/99           | 20.50                        | 20.13                  | 20.06      | 20.06        |
|               | 36/0           | 20.50                        | 20.00                  | 20.10      | 19.94        |               | 50/0           | 20.50                        | 19.95                  | 19.92      | 19.97        |
|               | 36/19          | 20.50                        | 20.00                  | 19.95      | 19.95        |               | 50/25          | 20.50                        | 20.03                  | 19.93      | 20.01        |
|               | 36/39          | 20.50                        | 20.01                  | 19.89      | 19.93        |               | 50/50          | 20.50                        | 19.95                  | 19.82      | 19.89        |
|               | 75/0           | 20.50                        | 19.99                  | 19.91      | 20.00        |               | 100/0          | 20.50                        | 19.95                  | 19.86      | 19.95        |
| 64QAM         | 1/0            | 20.50                        | 20.18                  | 20.00      | 20.02        | 64QAM         | 1/0            | 20.50                        | 20.02                  | 20.17      | 19.81        |
|               | 1/37           | 20.50                        | 20.26                  | 20.10      | 20.07        |               | 1/50           | 20.50                        | 20.19                  | 19.98      | 20.27        |
|               | 1/74           | 20.50                        | 20.14                  | 20.00      | 19.97        |               | 1/99           | 20.50                        | 19.97                  | 20.21      | 19.84        |
|               | 36/0           | 20.50                        | 20.03                  | 20.00      | 20.06        |               | 50/0           | 20.50                        | 19.96                  | 19.90      | 20.02        |
|               | 36/19          | 20.50                        | 20.02                  | 19.86      | 20.04        |               | 50/25          | 20.50                        | 20.05                  | 19.92      | 20.04        |
|               | 36/39          | 20.50                        | 20.03                  | 19.82      | 20.03        |               | 50/50          | 20.50                        | 19.98                  | 19.82      | 19.95        |
|               | 75/0           | 20.50                        | 20.01                  | 19.86      | 20.01        |               | 100/0          | 20.50                        | 19.95                  | 19.84      | 19.97        |

Note: The tested channels are marks in bold.

## 2. Conducted power measurement results of LTE B4

Down Antenna\_Receiver on

| LTE B4/BW=1.4M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=3M |                | Average Conducted Power(dBm) |                        |              |              |
|----------------|----------------|------------------------------|------------------------|--------------|--------------|--------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|                |                |                              | 19957/1710.7           | 20175/1732.5 | 20393/1754.3 |              |                |                              | 19965/1711.5           | 20175/1732.5 | 20385/1753.5 |
| QPSK           | 1/0            | 24.00                        | 22.75                  | 22.81        | 22.73        | QPSK         | 1/0            | 24.00                        | 22.73                  | 22.93        | 22.77        |
|                | 1/2            | 24.00                        | 22.88                  | 22.99        | 22.84        |              | 1/7            | 24.00                        | 22.91                  | 23.08        | 22.88        |
|                | 1/5            | 24.00                        | 22.77                  | 22.82        | 22.71        |              | 1/14           | 24.00                        | 22.84                  | 22.94        | 22.75        |
|                | 3/0            | 24.00                        | 22.85                  | 22.91        | 22.88        |              | 8/0            | 23.00                        | 21.81                  | 21.90        | 21.78        |
|                | 3/1            | 24.00                        | 22.89                  | 22.96        | 22.92        |              | 8/3            | 23.00                        | 21.83                  | 21.96        | 21.84        |
|                | 3/3            | 24.00                        | 22.85                  | 22.98        | 22.96        |              | 8/7            | 23.00                        | 21.79                  | 21.90        | 21.77        |
|                | 6/0            | 23.00                        | 21.77                  | 21.92        | 21.72        |              | 15/0           | 23.00                        | 21.80                  | 21.93        | 21.81        |
| 16QAM          | 1/0            | 23.00                        | 21.77                  | 21.93        | 22.23        | 16QAM        | 1/0            | 23.00                        | 21.75                  | 22.23        | 21.92        |
|                | 1/2            | 23.00                        | 21.87                  | 22.09        | 22.30        |              | 1/7            | 23.00                        | 21.86                  | 22.43        | 22.02        |
|                | 1/5            | 23.00                        | 21.79                  | 21.98        | 22.20        |              | 1/14           | 23.00                        | 21.75                  | 22.31        | 21.88        |
|                | 3/0            | 23.00                        | 22.01                  | 21.98        | 22.19        |              | 8/0            | 22.00                        | 20.93                  | 21.01        | 20.89        |
|                | 3/1            | 23.00                        | 22.09                  | 22.03        | 22.18        |              | 8/3            | 22.00                        | 20.98                  | 21.04        | 20.96        |
|                | 3/3            | 23.00                        | 22.04                  | 21.99        | 22.20        |              | 8/7            | 22.00                        | 20.92                  | 20.98        | 20.89        |
|                | 6/0            | 22.00                        | 20.95                  | 21.05        | 20.74        |              | 15/0           | 22.00                        | 20.89                  | 20.92        | 20.83        |
| 64QAM          | 1/0            | 22.00                        | 20.87                  | 21.00        | 21.21        | 64QAM        | 1/0            | 22.00                        | 21.10                  | 20.98        | 21.02        |
|                | 1/2            | 22.00                        | 21.02                  | 21.11        | 21.38        |              | 1/7            | 22.00                        | 21.26                  | 21.18        | 21.18        |
|                | 1/5            | 22.00                        | 20.87                  | 21.04        | 21.22        |              | 1/14           | 22.00                        | 21.17                  | 21.07        | 20.97        |
|                | 3/0            | 22.00                        | 20.97                  | 20.88        | 21.26        |              | 8/0            | 21.00                        | 19.86                  | 19.94        | 19.75        |
|                | 3/1            | 22.00                        | 21.04                  | 20.92        | 21.30        |              | 8/3            | 21.00                        | 19.91                  | 19.98        | 19.81        |
|                | 3/3            | 22.00                        | 20.99                  | 20.93        | 21.26        |              | 8/7            | 21.00                        | 19.87                  | 19.97        | 19.74        |
|                | 6/0            | 21.00                        | 20.06                  | 20.01        | 19.76        |              | 15/0           | 21.00                        | 19.80                  | 19.92        | 19.86        |

| LTE B4/BW=5M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=10M |                | Average Conducted Power(dBm) |                        |              |            |
|--------------|----------------|------------------------------|------------------------|--------------|--------------|---------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|              |                |                              | 19975/1712.5           | 20175/1732.5 | 20375/1752.5 |               |                |                              | 20000/1715             | 20175/1732.5 | 20350/1750 |
| QPSK         | 1/0            | 24.00                        | 22.78                  | 22.82        | 22.74        | QPSK          | 1/0            | 24.00                        | 22.75                  | 22.92        | 22.79      |
|              | 1/12           | 24.00                        | 22.97                  | 22.99        | 22.87        |               | 1/24           | 24.00                        | 22.86                  | 22.99        | 22.77      |
|              | 1/24           | 24.00                        | 22.83                  | 22.83        | 22.76        |               | 1/49           | 24.00                        | 22.80                  | 22.94        | 22.73      |
|              | 12/0           | 23.00                        | 21.78                  | 21.92        | 21.80        |               | 25/0           | 23.00                        | 21.83                  | 21.98        | 21.84      |
|              | 12/6           | 23.00                        | 21.86                  | 21.98        | 21.87        |               | 25/12          | 23.00                        | 21.91                  | 21.97        | 21.85      |
|              | 12/13          | 23.00                        | 21.88                  | 21.97        | 21.86        |               | 25/25          | 23.00                        | 21.95                  | 21.93        | 21.87      |
|              | 25/0           | 23.00                        | 21.83                  | 21.90        | 21.85        |               | 50/0           | 23.00                        | 21.93                  | 21.99        | 21.91      |
| 16QAM        | 1/0            | 23.00                        | 21.91                  | 22.33        | 21.86        | 16QAM         | 1/0            | 23.00                        | 21.72                  | 22.19        | 21.86      |
|              | 1/12           | 23.00                        | 22.08                  | 22.48        | 21.98        |               | 1/24           | 23.00                        | 21.96                  | 22.48        | 22.03      |
|              | 1/24           | 23.00                        | 21.93                  | 22.36        | 21.86        |               | 1/49           | 23.00                        | 21.80                  | 22.30        | 21.84      |
|              | 12/0           | 22.00                        | 20.87                  | 21.00        | 20.93        |               | 25/0           | 22.00                        | 20.90                  | 21.05        | 21.02      |
|              | 12/6           | 22.00                        | 20.98                  | 21.09        | 20.98        |               | 25/12          | 22.00                        | 20.98                  | 21.02        | 21.02      |
|              | 12/13          | 22.00                        | 20.99                  | 21.09        | 20.98        |               | 25/25          | 22.00                        | 21.01                  | 21.02        | 21.03      |
|              | 25/0           | 22.00                        | 20.88                  | 20.99        | 20.86        |               | 50/0           | 22.00                        | 20.95                  | 21.04        | 20.97      |
| 64QAM        | 1/0            | 22.00                        | 20.65                  | 21.09        | 20.96        | 64QAM         | 1/0            | 22.00                        | 21.08                  | 21.00        | 20.99      |
|              | 1/12           | 22.00                        | 20.84                  | 21.28        | 21.14        |               | 1/24           | 22.00                        | 21.32                  | 21.23        | 21.16      |
|              | 1/24           | 22.00                        | 20.72                  | 21.14        | 21.01        |               | 1/49           | 22.00                        | 21.16                  | 21.06        | 21.02      |
|              | 12/0           | 21.00                        | 19.81                  | 19.81        | 19.86        |               | 25/0           | 21.00                        | 19.86                  | 20.01        | 19.94      |
|              | 12/6           | 21.00                        | 19.87                  | 19.87        | 19.92        |               | 25/12          | 21.00                        | 19.96                  | 20.01        | 19.93      |
|              | 12/13          | 21.00                        | 19.93                  | 19.85        | 19.92        |               | 25/25          | 21.00                        | 19.97                  | 19.99        | 19.95      |
|              | 25/0           | 21.00                        | 19.79                  | 19.83        | 19.84        |               | 50/0           | 21.00                        | 19.93                  | 19.99        | 19.88      |

| LTE B4/BW=15M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |
|---------------|----------------|------------------------------|------------------------|--------------|--------------|---------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|               |                |                              | 20025/1717.5           | 20175/1732.5 | 20325/1747.5 |               |                |                              | 20050/1720             | 20175/1732.5 | 20300/1745 |
| QPSK          | 1/0            | 24.00                        | 22.66                  | 22.82        | 22.74        | QPSK          | 1/0            | 24.00                        | 22.65                  | 22.75        | 22.69      |
|               | 1/37           | 24.00                        | 22.84                  | 22.98        | 22.83        |               | 1/50           | 24.00                        | <b>23.14</b>           | 23.02        | 23.11      |
|               | 1/74           | 24.00                        | 22.77                  | 22.86        | 22.70        |               | 1/99           | 24.00                        | 22.78                  | 22.74        | 22.68      |
|               | 36/0           | 23.00                        | 21.84                  | 22.86        | 21.88        |               | 50/0           | 23.00                        | 21.78                  | <b>21.93</b> | 21.88      |
|               | 36/19          | 23.00                        | 21.91                  | 21.95        | 21.84        |               | 50/25          | 23.00                        | 21.90                  | 21.92        | 21.90      |
|               | 36/39          | 23.00                        | 21.92                  | 21.91        | 21.79        |               | 50/50          | 23.00                        | 21.87                  | 21.88        | 21.85      |
|               | 75/0           | 23.00                        | 21.85                  | 21.96        | 21.82        |               | 100/0          | 23.00                        | 21.80                  | 21.90        | 21.84      |
| 16QAM         | 1/0            | 23.00                        | 21.61                  | 22.14        | 22.18        | 16QAM         | 1/0            | 23.00                        | 22.02                  | 22.03        | 22.06      |
|               | 1/37           | 23.00                        | 21.77                  | 22.31        | 22.33        |               | 1/50           | 23.00                        | 22.49                  | 22.44        | 22.53      |
|               | 1/74           | 23.00                        | 21.74                  | 22.21        | 22.23        |               | 1/99           | 23.00                        | 22.15                  | 22.14        | 22.11      |
|               | 36/0           | 22.00                        | 20.85                  | 21.01        | 20.82        |               | 50/0           | 22.00                        | 20.84                  | 20.98        | 20.94      |
|               | 36/19          | 22.00                        | 20.89                  | 21.00        | 20.87        |               | 50/25          | 22.00                        | 20.97                  | 20.98        | 20.98      |
|               | 36/39          | 22.00                        | 20.91                  | 20.95        | 20.77        |               | 50/50          | 22.00                        | 20.94                  | 20.92        | 20.93      |
|               | 75/0           | 22.00                        | 20.89                  | 20.94        | 20.83        |               | 100/0          | 22.00                        | 20.89                  | 20.93        | 20.97      |
| 64QAM         | 1/0            | 22.00                        | 21.01                  | 20.89        | 21.35        | 64QAM         | 1/0            | 22.00                        | 20.86                  | 21.22        | 20.81      |
|               | 1/37           | 22.00                        | 21.19                  | 21.06        | 21.48        |               | 1/50           | 22.00                        | 21.33                  | 21.15        | 21.26      |
|               | 1/74           | 22.00                        | 21.09                  | 20.96        | 21.37        |               | 1/99           | 22.00                        | 21.01                  | 21.28        | 20.83      |
|               | 36/0           | 21.00                        | 19.88                  | 20.96        | 19.88        |               | 50/0           | 21.00                        | 19.85                  | 19.96        | 19.88      |
|               | 36/19          | 21.00                        | 19.95                  | 20.02        | 19.89        |               | 50/25          | 21.00                        | 19.96                  | 19.93        | 19.90      |
|               | 36/39          | 21.00                        | 19.97                  | 20.00        | 19.86        |               | 50/50          | 21.00                        | 19.95                  | 19.88        | 19.86      |
|               | 75/0           | 21.00                        | 19.90                  | 19.98        | 19.91        |               | 100/0          | 21.00                        | 19.86                  | 19.91        | 19.85      |

Down Antenna Receiver off

| LTE B4/BW=1.4M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=3M |                | Average Conducted Power(dBm) |                        |              |              |
|----------------|----------------|------------------------------|------------------------|--------------|--------------|--------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|                |                |                              | 19957/1710.7           | 20175/1732.5 | 20393/1754.3 |              |                |                              | 19965/1711.5           | 20175/1732.5 | 20385/1753.5 |
| QPSK           | 1/0            | 21.00                        | 20.03                  | 20.02        | 19.97        | QPSK         | 1/0            | 21.00                        | 19.78                  | 19.84        | 19.82        |
|                | 1/2            | 21.00                        | 20.12                  | 20.14        | 20.08        |              | 1/7            | 21.00                        | 19.95                  | 20.05        | 20.00        |
|                | 1/5            | 21.00                        | 19.99                  | 20.03        | 19.98        |              | 1/14           | 21.00                        | 19.80                  | 19.94        | 19.85        |
|                | 3/0            | 21.00                        | 19.90                  | 19.91        | 19.85        |              | 8/0            | 21.00                        | 19.86                  | 19.95        | 19.83        |
|                | 3/1            | 21.00                        | 19.95                  | 20.00        | 19.91        |              | 8/3            | 21.00                        | 19.88                  | 19.99        | 19.86        |
|                | 3/3            | 21.00                        | 19.88                  | 19.98        | 19.88        |              | 8/7            | 21.00                        | 19.83                  | 19.93        | 19.82        |
|                | 6/0            | 21.00                        | 19.82                  | 19.98        | 19.82        |              | 15/0           | 21.00                        | 19.84                  | 19.94        | 19.82        |
| 16QAM          | 1/0            | 21.00                        | 19.76                  | 19.97        | 20.15        | 16QAM        | 1/0            | 21.00                        | 19.75                  | 20.04        | 19.88        |
|                | 1/2            | 21.00                        | 19.89                  | 20.06        | 20.25        |              | 1/7            | 21.00                        | 19.86                  | 20.23        | 20.01        |
|                | 1/5            | 21.00                        | 19.82                  | 19.96        | 20.14        |              | 1/14           | 21.00                        | 19.77                  | 20.11        | 19.82        |
|                | 3/0            | 21.00                        | 20.06                  | 19.95        | 20.04        |              | 8/0            | 21.00                        | 19.93                  | 20.01        | 19.88        |
|                | 3/1            | 21.00                        | 20.11                  | 20.01        | 20.12        |              | 8/3            | 21.00                        | 19.97                  | 20.05        | 19.92        |
|                | 3/3            | 21.00                        | 20.08                  | 19.92        | 20.08        |              | 8/7            | 21.00                        | 19.93                  | 19.99        | 19.90        |
|                | 6/0            | 21.00                        | 20.00                  | 20.06        | 19.75        |              | 15/0           | 21.00                        | 19.84                  | 19.94        | 19.81        |
| 64QAM          | 1/0            | 21.00                        | 19.95                  | 20.01        | 19.98        | 64QAM        | 1/0            | 21.00                        | 20.00                  | 19.99        | 19.94        |
|                | 1/2            | 21.00                        | 20.04                  | 20.19        | 20.08        |              | 1/7            | 21.00                        | 20.17                  | 20.16        | 20.11        |
|                | 1/5            | 21.00                        | 19.97                  | 20.01        | 19.97        |              | 1/14           | 21.00                        | 19.97                  | 20.02        | 20.02        |
|                | 3/0            | 21.00                        | 19.84                  | 20.20        | 19.83        |              | 8/0            | 21.00                        | 19.79                  | 19.98        | 19.89        |
|                | 3/1            | 21.00                        | 19.84                  | 20.23        | 19.89        |              | 8/3            | 21.00                        | 19.83                  | 20.03        | 19.94        |
|                | 3/3            | 21.00                        | 19.82                  | 20.19        | 19.87        |              | 8/7            | 21.00                        | 19.79                  | 19.95        | 19.90        |
|                | 6/0            | 21.00                        | 19.92                  | 19.91        | 19.94        |              | 15/0           | 21.00                        | 19.88                  | 19.89        | 19.88        |

| LTE B4/BW=5M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=10M |                | Average Conducted Power(dBm) |                        |              |            |
|--------------|----------------|------------------------------|------------------------|--------------|--------------|---------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|              |                |                              | 19975/1712.5           | 20175/1732.5 | 20375/1752.5 |               |                |                              | 20000/1715             | 20175/1732.5 | 20350/1750 |
| QPSK         | 1/0            | 21.00                        | 19.79                  | 19.82        | 19.76        | QPSK          | 1/0            | 21.00                        | 19.76                  | 19.92        | 19.82      |
|              | 1/12           | 21.00                        | 19.95                  | 19.97        | 19.91        |               | 1/24           | 21.00                        | 19.99                  | 20.16        | 19.97      |
|              | 1/24           | 21.00                        | 19.80                  | 19.88        | 19.81        |               | 1/49           | 21.00                        | 19.88                  | 19.97        | 19.77      |
|              | 12/0           | 21.00                        | 19.79                  | 19.92        | 19.86        |               | 25/0           | 21.00                        | 19.82                  | 19.97        | 19.89      |
|              | 12/6           | 21.00                        | 19.88                  | 19.99        | 19.91        |               | 25/12          | 21.00                        | 19.92                  | 19.98        | 19.88      |
|              | 12/13          | 21.00                        | 19.89                  | 19.94        | 19.94        |               | 25/25          | 21.00                        | 19.89                  | 20.00        | 19.90      |
|              | 25/0           | 21.00                        | 19.80                  | 19.91        | 19.83        |               | 50/0           | 21.00                        | 19.90                  | 20.02        | 19.90      |
| 16QAM        | 1/0            | 21.00                        | 19.90                  | 20.10        | 19.80        | 16QAM         | 1/0            | 21.00                        | 19.71                  | 20.03        | 19.85      |
|              | 1/12           | 21.00                        | 20.08                  | 20.24        | 19.97        |               | 1/24           | 21.00                        | 19.93                  | 20.24        | 20.01      |
|              | 1/24           | 21.00                        | 19.95                  | 20.12        | 19.87        |               | 1/49           | 21.00                        | 19.80                  | 20.06        | 19.83      |
|              | 12/0           | 21.00                        | 19.86                  | 20.03        | 19.86        |               | 25/0           | 21.00                        | 19.87                  | 20.02        | 19.99      |
|              | 12/6           | 21.00                        | 19.94                  | 20.07        | 19.92        |               | 25/12          | 21.00                        | 19.96                  | 20.01        | 19.98      |
|              | 12/13          | 21.00                        | 19.99                  | 20.07        | 19.93        |               | 25/25          | 21.00                        | 19.97                  | 20.00        | 20.00      |
|              | 25/0           | 21.00                        | 19.84                  | 19.98        | 19.82        |               | 50/0           | 21.00                        | 19.92                  | 20.00        | 19.95      |
| 64QAM        | 1/0            | 21.00                        | 19.66                  | 20.10        | 19.97        | 64QAM         | 1/0            | 21.00                        | 20.09                  | 20.00        | 20.01      |
|              | 1/12           | 21.00                        | 19.81                  | 20.18        | 20.10        |               | 1/24           | 21.00                        | 20.14                  | 20.02        | 20.17      |
|              | 1/24           | 21.00                        | 19.70                  | 20.12        | 19.98        |               | 1/49           | 21.00                        | 20.15                  | 20.06        | 19.96      |
|              | 12/0           | 21.00                        | 19.81                  | 19.84        | 19.89        |               | 25/0           | 21.00                        | 19.88                  | 20.05        | 19.97      |
|              | 12/6           | 21.00                        | 19.91                  | 19.91        | 19.95        |               | 25/12          | 21.00                        | 19.97                  | 20.04        | 19.97      |
|              | 12/13          | 21.00                        | 19.94                  | 19.89        | 19.95        |               | 25/25          | 21.00                        | 20.00                  | 20.03        | 20.00      |
|              | 25/0           | 21.00                        | 19.80                  | 19.89        | 19.87        |               | 50/0           | 21.00                        | 19.97                  | 20.05        | 19.92      |

| LTE B4/BW=15M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |
|---------------|----------------|------------------------------|------------------------|--------------|--------------|---------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|               |                |                              | 20025/1717.5           | 20175/1732.5 | 20325/1747.5 |               |                |                              | 20050/1720             | 20175/1732.5 | 20300/1745 |
| QPSK          | 1/0            | 21.00                        | 19.87                  | 19.97        | 20.01        | QPSK          | 1/0            | 21.00                        | 19.72                  | 19.81        | 19.78      |
|               | 1/37           | 21.00                        | 20.11                  | 20.12        | 20.10        |               | 1/50           | 21.00                        | <b>20.28</b>           | 20.10        | 20.22      |
|               | 1/74           | 21.00                        | 20.09                  | 20.00        | 19.95        |               | 1/99           | 21.00                        | 19.90                  | 19.85        | 19.76      |
|               | 36/0           | 21.00                        | 19.88                  | 19.80        | 19.99        |               | 50/0           | 21.00                        | 19.83                  | <b>19.97</b> | 19.92      |
|               | 36/19          | 21.00                        | 19.95                  | 20.03        | 19.94        |               | 50/25          | 21.00                        | 19.91                  | 19.96        | 19.92      |
|               | 36/39          | 21.00                        | 19.96                  | 19.99        | 19.92        |               | 50/50          | 21.00                        | 19.90                  | 19.90        | 19.87      |
|               | 75/0           | 21.00                        | 19.90                  | 19.99        | 19.93        |               | 100/0          | 21.00                        | 19.87                  | 19.96        | 19.91      |
| 16QAM         | 1/0            | 21.00                        | 19.62                  | 20.14        | 20.15        | 16QAM         | 1/0            | 21.00                        | 20.06                  | 20.08        | 19.97      |
|               | 1/37           | 21.00                        | 19.79                  | 20.18        | 20.18        |               | 1/50           | 21.00                        | 20.02                  | 19.97        | 20.01      |
|               | 1/74           | 21.00                        | 19.73                  | 20.16        | 20.18        |               | 1/99           | 21.00                        | 20.08                  | 20.06        | 20.03      |
|               | 36/0           | 21.00                        | 19.90                  | 20.16        | 19.90        |               | 50/0           | 21.00                        | 19.86                  | 19.95        | 19.87      |
|               | 36/19          | 21.00                        | 19.93                  | 20.03        | 19.88        |               | 50/25          | 21.00                        | 19.94                  | 19.98        | 19.88      |
|               | 36/39          | 21.00                        | 19.97                  | 20.03        | 19.85        |               | 50/50          | 21.00                        | 19.97                  | 19.91        | 19.87      |
|               | 75/0           | 21.00                        | 19.92                  | 20.00        | 19.92        |               | 100/0          | 21.00                        | 19.91                  | 19.94        | 19.91      |
| 64QAM         | 1/0            | 21.00                        | 20.00                  | 19.91        | 20.10        | 64QAM         | 1/0            | 21.00                        | 19.84                  | 20.00        | 19.91      |
|               | 1/37           | 21.00                        | 20.19                  | 20.06        | 20.23        |               | 1/50           | 21.00                        | 20.12                  | 19.95        | 20.13      |
|               | 1/74           | 21.00                        | 20.11                  | 19.96        | 20.14        |               | 1/99           | 21.00                        | 19.98                  | 20.05        | 19.95      |
|               | 36/0           | 21.00                        | 19.92                  | 19.96        | 19.92        |               | 50/0           | 21.00                        | 19.84                  | 19.97        | 19.95      |
|               | 36/19          | 21.00                        | 19.97                  | 20.06        | 19.92        |               | 50/25          | 21.00                        | 19.96                  | 19.98        | 19.94      |
|               | 36/39          | 21.00                        | 19.99                  | 20.02        | 19.91        |               | 50/50          | 21.00                        | 19.95                  | 19.92        | 19.95      |
|               | 75/0           | 21.00                        | 19.95                  | 20.02        | 19.96        |               | 100/0          | 21.00                        | 19.89                  | 19.92        | 19.96      |

Up Antenna Receiver on

| LTE B4/BW=1.4M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=3M |                | Average Conducted Power(dBm) |                        |              |              |
|----------------|----------------|------------------------------|------------------------|--------------|--------------|--------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|                |                |                              | 19957/1710.7           | 20175/1732.5 | 20393/1754.3 |              |                |                              | 19965/1711.5           | 20175/1732.5 | 20385/1753.5 |
| QPSK           | 1/0            | 18.00                        | 17.11                  | 17.33        | 17.21        | QPSK         | 1/0            | 18.00                        | 17.17                  | 17.18        | 17.59        |
|                | 1/2            | 18.00                        | 17.21                  | 17.45        | 17.29        |              | 1/7            | 18.00                        | 17.33                  | 17.33        | 17.76        |
|                | 1/5            | 18.00                        | 17.13                  | 17.34        | 17.24        |              | 1/14           | 18.00                        | 17.14                  | 17.19        | 17.62        |
|                | 3/0            | 18.00                        | 17.29                  | 17.33        | 17.43        |              | 8/0            | 18.00                        | 17.19                  | 17.39        | 17.33        |
|                | 3/1            | 18.00                        | 17.41                  | 17.36        | 17.48        |              | 8/3            | 18.00                        | 17.23                  | 17.42        | 17.36        |
|                | 3/3            | 18.00                        | 17.36                  | 17.32        | 17.45        |              | 8/7            | 18.00                        | 17.21                  | 17.38        | 17.31        |
|                | 6/0            | 18.00                        | 17.32                  | 17.43        | 17.39        |              | 15/0           | 18.00                        | 17.12                  | 17.30        | 17.25        |
| 16QAM          | 1/0            | 18.00                        | 17.10                  | 17.25        | 17.14        | 16QAM        | 1/0            | 18.00                        | 17.06                  | 17.30        | 17.20        |
|                | 1/2            | 18.00                        | 17.25                  | 17.42        | 17.30        |              | 1/7            | 18.00                        | 17.27                  | 17.48        | 17.36        |
|                | 1/5            | 18.00                        | 17.10                  | 17.29        | 17.13        |              | 1/14           | 18.00                        | 17.19                  | 17.33        | 17.19        |
|                | 3/0            | 18.00                        | 17.17                  | 17.39        | 17.29        |              | 8/0            | 18.00                        | 17.16                  | 17.30        | 17.24        |
|                | 3/1            | 18.00                        | 17.23                  | 17.41        | 17.33        |              | 8/3            | 18.00                        | 17.19                  | 17.36        | 17.29        |
|                | 3/3            | 18.00                        | 17.21                  | 17.37        | 17.34        |              | 8/7            | 18.00                        | 17.16                  | 17.29        | 17.23        |
|                | 6/0            | 18.00                        | 17.17                  | 17.31        | 17.26        |              | 15/0           | 18.00                        | 17.16                  | 17.25        | 17.23        |
| 64QAM          | 1/0            | 18.00                        | 17.24                  | 17.58        | 17.30        | 64QAM        | 1/0            | 18.00                        | 17.43                  | 17.35        | 17.42        |
|                | 1/2            | 18.00                        | 17.37                  | 17.75        | 17.45        |              | 1/7            | 18.00                        | 17.59                  | 17.55        | 17.57        |
|                | 1/5            | 18.00                        | 17.26                  | 17.59        | 17.29        |              | 1/14           | 18.00                        | 17.48                  | 17.43        | 17.37        |
|                | 3/0            | 18.00                        | 17.11                  | 17.57        | 17.36        |              | 8/0            | 18.00                        | 17.22                  | 17.31        | 17.21        |
|                | 3/1            | 18.00                        | 17.15                  | 17.59        | 17.39        |              | 8/3            | 18.00                        | 17.25                  | 17.38        | 17.22        |
|                | 3/3            | 18.00                        | 17.13                  | 17.55        | 17.38        |              | 8/7            | 18.00                        | 17.20                  | 17.35        | 17.21        |
|                | 6/0            | 18.00                        | 17.23                  | 17.26        | 17.53        |              | 15/0           | 18.00                        | 17.12                  | 17.30        | 17.26        |

| LTE B4/BW=5M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=10M |                | Average Conducted Power(dBm) |                        |              |            |
|--------------|----------------|------------------------------|------------------------|--------------|--------------|---------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|              |                |                              | 19975/1712.5           | 20175/1732.5 | 20375/1752.5 |               |                |                              | 20000/1715             | 20175/1732.5 | 20350/1750 |
| QPSK         | 1/0            | 18.00                        | 17.22                  | 17.66        | 17.22        | QPSK          | 1/0            | 18.00                        | 17.02                  | 17.56        | 17.24      |
|              | 1/12           | 18.00                        | 17.38                  | 17.82        | 17.40        |               | 1/24           | 18.00                        | 17.29                  | 17.79        | 17.40      |
|              | 1/24           | 18.00                        | 17.27                  | 17.70        | 17.28        |               | 1/49           | 18.00                        | 17.12                  | 17.65        | 17.25      |
|              | 12/0           | 18.00                        | 17.19                  | 17.37        | 17.28        |               | 25/0           | 18.00                        | 17.16                  | 17.36        | 17.34      |
|              | 12/6           | 18.00                        | 17.25                  | 17.45        | 17.33        |               | 25/12          | 18.00                        | 17.30                  | 17.37        | 17.34      |
|              | 12/13          | 18.00                        | 17.32                  | 17.43        | 17.30        |               | 25/25          | 18.00                        | 17.24                  | 17.32        | 17.31      |
|              | 25/0           | 18.00                        | 17.14                  | 17.32        | 17.18        |               | 50/0           | 18.00                        | 17.22                  | 17.33        | 17.28      |
| 16QAM        | 1/0            | 18.00                        | 17.12                  | 17.18        | 17.19        | 16QAM         | 1/0            | 18.00                        | 17.12                  | 17.29        | 17.19      |
|              | 1/12           | 18.00                        | 17.30                  | 17.36        | 17.32        |               | 1/24           | 18.00                        | 17.31                  | 17.51        | 17.36      |
|              | 1/24           | 18.00                        | 17.17                  | 17.24        | 17.22        |               | 1/49           | 18.00                        | 17.20                  | 17.35        | 17.17      |
|              | 12/0           | 18.00                        | 17.12                  | 17.24        | 17.27        |               | 25/0           | 18.00                        | 17.15                  | 17.32        | 17.21      |
|              | 12/6           | 18.00                        | 17.22                  | 17.36        | 17.31        |               | 25/12          | 18.00                        | 17.27                  | 17.35        | 17.24      |
|              | 12/13          | 18.00                        | 17.21                  | 17.32        | 17.27        |               | 25/25          | 18.00                        | 17.22                  | 17.30        | 17.21      |
|              | 25/0           | 18.00                        | 17.14                  | 17.25        | 17.20        |               | 50/0           | 18.00                        | 17.23                  | 17.33        | 17.23      |
| 64QAM        | 1/0            | 18.00                        | 16.96                  | 17.45        | 17.36        | 64QAM         | 1/0            | 18.00                        | 17.41                  | 17.33        | 17.36      |
|              | 1/12           | 18.00                        | 17.15                  | 17.62        | 17.52        |               | 1/24           | 18.00                        | 17.65                  | 17.57        | 17.54      |
|              | 1/24           | 18.00                        | 16.98                  | 17.51        | 17.39        |               | 1/49           | 18.00                        | 17.52                  | 17.42        | 17.46      |
|              | 12/0           | 18.00                        | 17.13                  | 17.17        | 17.25        |               | 25/0           | 18.00                        | 17.19                  | 17.38        | 17.32      |
|              | 12/6           | 18.00                        | 17.23                  | 17.25        | 17.33        |               | 25/12          | 18.00                        | 17.30                  | 17.40        | 17.35      |
|              | 12/13          | 18.00                        | 17.23                  | 17.24        | 17.30        |               | 25/25          | 18.00                        | 17.25                  | 17.37        | 17.30      |
|              | 25/0           | 18.00                        | 17.08                  | 17.21        | 17.23        |               | 50/0           | 18.00                        | 17.23                  | 17.35        | 17.25      |

| LTE B4/BW=15M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |
|---------------|----------------|------------------------------|------------------------|--------------|--------------|---------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|               |                |                              | 20025/1717.5           | 20175/1732.5 | 20325/1747.5 |               |                |                              | 20050/1720             | 20175/1732.5 | 20300/1745 |
| QPSK          | 1/0            | 18.00                        | 16.94                  | 17.51        | 17.52        | QPSK          | 1/0            | 18.00                        | 17.35                  | 17.38        | 17.36      |
|               | 1/37           | 18.00                        | 17.13                  | 17.65        | 17.66        |               | 1/50           | 18.00                        | <b>17.86</b>           | 17.56        | 17.82      |
|               | 1/74           | 18.00                        | 17.10                  | 17.54        | 17.57        |               | 1/99           | 18.00                        | 17.52                  | 17.50        | 17.38      |
|               | 36/0           | 18.00                        | 17.19                  | 17.54        | 17.25        |               | 50/0           | 18.00                        | 17.19                  | 17.31        | 17.27      |
|               | 36/19          | 18.00                        | 17.24                  | 17.38        | 17.25        |               | 50/25          | 18.00                        | 17.28                  | <b>17.33</b> | 17.25      |
|               | 36/39          | 18.00                        | 17.23                  | 17.35        | 17.20        |               | 50/50          | 18.00                        | 17.26                  | 17.30        | 17.20      |
|               | 75/0           | 18.00                        | 17.22                  | 17.31        | 17.26        |               | 100/0          | 18.00                        | 17.24                  | 17.28        | 17.27      |
| 16QAM         | 1/0            | 18.00                        | 17.00                  | 17.17        | 17.12        | 16QAM         | 1/0            | 18.00                        | 16.83                  | 16.98        | 16.95      |
|               | 1/37           | 18.00                        | 17.21                  | 17.39        | 17.23        |               | 1/50           | 18.00                        | 17.32                  | 17.23        | 17.41      |
|               | 1/74           | 18.00                        | 17.16                  | 17.25        | 17.13        |               | 1/99           | 18.00                        | 17.04                  | 17.04        | 16.97      |
|               | 36/0           | 18.00                        | 17.19                  | 17.25        | 17.29        |               | 50/0           | 18.00                        | 17.17                  | 17.30        | 17.27      |
|               | 36/19          | 18.00                        | 17.30                  | 17.36        | 17.30        |               | 50/25          | 18.00                        | 17.25                  | 17.32        | 17.26      |
|               | 36/39          | 18.00                        | 17.27                  | 17.32        | 17.22        |               | 50/50          | 18.00                        | 17.23                  | 17.27        | 17.21      |
|               | 75/0           | 18.00                        | 17.22                  | 17.33        | 17.24        |               | 100/0          | 18.00                        | 17.19                  | 17.28        | 17.24      |
| 64QAM         | 1/0            | 18.00                        | 17.34                  | 17.24        | 17.40        | 64QAM         | 1/0            | 18.00                        | 17.15                  | 17.53        | 17.15      |
|               | 1/37           | 18.00                        | 17.51                  | 17.40        | 17.55        |               | 1/50           | 18.00                        | 17.64                  | 17.25        | 17.59      |
|               | 1/74           | 18.00                        | 17.47                  | 17.29        | 17.43        |               | 1/99           | 18.00                        | 17.32                  | 17.63        | 17.17      |
|               | 36/0           | 18.00                        | 17.21                  | 17.29        | 17.28        |               | 50/0           | 18.00                        | 17.19                  | 17.32        | 17.26      |
|               | 36/19          | 18.00                        | 17.27                  | 17.41        | 17.31        |               | 50/25          | 18.00                        | 17.30                  | 17.32        | 17.30      |
|               | 36/39          | 18.00                        | 17.27                  | 17.34        | 17.26        |               | 50/50          | 18.00                        | 17.25                  | 17.28        | 17.22      |
|               | 75/0           | 18.00                        | 17.23                  | 17.30        | 17.27        |               | 100/0          | 18.00                        | 17.25                  | 17.27        | 17.27      |

Up Antenna Receiver off

| LTE B4/BW=1.4M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=3M |                | Average Conducted Power(dBm) |                        |              |              |
|----------------|----------------|------------------------------|------------------------|--------------|--------------|--------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|                |                |                              | 19957/1710.7           | 20175/1732.5 | 20393/1754.3 |              |                |                              | 19965/1711.5           | 20175/1732.5 | 20385/1753.5 |
| QPSK           | 1/0            | 22.00                        | 21.06                  | 21.21        | 21.04        | QPSK         | 1/0            | 22.00                        | 21.06                  | 21.29        | 21.14        |
|                | 1/2            | 22.00                        | 21.17                  | 21.33        | 21.20        |              | 1/7            | 22.00                        | 21.22                  | 21.44        | 21.29        |
|                | 1/5            | 22.00                        | 21.04                  | 21.22        | 21.03        |              | 1/14           | 22.00                        | 21.14                  | 21.30        | 21.12        |
|                | 3/0            | 22.00                        | 21.13                  | 21.28        | 21.19        |              | 8/0            | 22.00                        | 21.11                  | 21.28        | 21.18        |
|                | 3/1            | 22.00                        | 21.16                  | 21.32        | 21.23        |              | 8/3            | 22.00                        | 21.16                  | 21.32        | 21.24        |
|                | 3/3            | 22.00                        | 21.13                  | 21.26        | 21.24        |              | 8/7            | 22.00                        | 21.11                  | 21.28        | 21.17        |
|                | 6/0            | 22.00                        | 21.14                  | 21.29        | 21.18        |              | 15/0           | 22.00                        | 21.09                  | 21.23        | 21.17        |
| 16QAM          | 1/0            | 22.00                        | 21.09                  | 21.35        | 21.55        | 16QAM        | 1/0            | 22.00                        | 21.04                  | 21.62        | 21.29        |
|                | 1/2            | 22.00                        | 21.18                  | 21.43        | 21.46        |              | 1/7            | 22.00                        | 21.18                  | 21.49        | 21.41        |
|                | 1/5            | 22.00                        | 21.11                  | 21.35        | 21.55        |              | 1/14           | 22.00                        | 21.11                  | 21.26        | 21.24        |
|                | 3/0            | 22.00                        | 21.37                  | 21.36        | 21.49        |              | 8/0            | 22.00                        | 21.26                  | 21.35        | 21.25        |
|                | 3/1            | 22.00                        | 21.42                  | 21.40        | 21.52        |              | 8/3            | 22.00                        | 21.31                  | 21.39        | 21.32        |
|                | 3/3            | 22.00                        | 21.38                  | 21.36        | 21.51        |              | 8/7            | 22.00                        | 21.25                  | 21.34        | 21.24        |
|                | 6/0            | 22.00                        | 21.29                  | 21.40        | 21.11        |              | 15/0           | 22.00                        | 21.20                  | 21.30        | 21.23        |
| 64QAM          | 1/0            | 22.00                        | 21.21                  | 21.55        | 21.28        | 64QAM        | 1/0            | 22.00                        | 21.42                  | 21.35        | 21.38        |
|                | 1/2            | 22.00                        | 21.32                  | 21.45        | 21.44        |              | 1/7            | 22.00                        | 21.59                  | 21.53        | 21.53        |
|                | 1/5            | 22.00                        | 21.25                  | 21.61        | 21.30        |              | 1/14           | 22.00                        | 21.44                  | 21.42        | 21.30        |
|                | 3/0            | 22.00                        | 21.14                  | 21.44        | 21.39        |              | 8/0            | 22.00                        | 20.19                  | 20.29        | 20.16        |
|                | 3/1            | 22.00                        | 21.18                  | 21.35        | 21.45        |              | 8/3            | 22.00                        | 20.25                  | 20.35        | 20.20        |
|                | 3/3            | 22.00                        | 21.16                  | 21.62        | 21.49        |              | 8/7            | 22.00                        | 20.20                  | 20.31        | 20.14        |
|                | 6/0            | 22.00                        | 20.17                  | 20.24        | 20.48        |              | 15/0           | 22.00                        | 20.14                  | 20.27        | 20.23        |

| LTE B4/BW=5M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=10M |                | Average Conducted Power(dBm) |                        |              |            |
|--------------|----------------|------------------------------|------------------------|--------------|--------------|---------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|              |                |                              | 19975/1712.5           | 20175/1732.5 | 20375/1752.5 |               |                |                              | 20000/1715             | 20175/1732.5 | 20350/1750 |
| QPSK         | 1/0            | 22.00                        | 21.07                  | 21.13        | 21.10        | QPSK          | 1/0            | 22.00                        | 21.05                  | 21.22        | 21.13      |
|              | 1/12           | 22.00                        | 21.26                  | 21.30        | 21.26        |               | 1/24           | 22.00                        | 21.30                  | 21.46        | 21.30      |
|              | 1/24           | 22.00                        | 21.13                  | 21.16        | 21.15        |               | 1/49           | 22.00                        | 21.13                  | 21.28        | 21.12      |
|              | 12/0           | 22.00                        | 21.05                  | 21.22        | 21.16        |               | 25/0           | 22.00                        | 21.10                  | 21.31        | 21.18      |
|              | 12/6           | 22.00                        | 21.16                  | 21.30        | 21.23        |               | 25/12          | 22.00                        | 21.19                  | 21.29        | 21.22      |
|              | 12/13          | 22.00                        | 21.19                  | 21.29        | 21.23        |               | 25/25          | 22.00                        | 21.22                  | 21.29        | 21.19      |
|              | 25/0           | 22.00                        | 21.08                  | 21.22        | 21.15        |               | 50/0           | 22.00                        | 21.20                  | 21.29        | 21.19      |
| 16QAM        | 1/0            | 22.00                        | 21.21                  | 21.57        | 21.23        | 16QAM         | 1/0            | 22.00                        | 21.03                  | 21.57        | 21.22      |
|              | 1/12           | 22.00                        | 21.41                  | 21.40        | 21.36        |               | 1/24           | 22.00                        | 21.27                  | 21.23        | 21.43      |
|              | 1/24           | 22.00                        | 21.28                  | 21.20        | 21.26        |               | 1/49           | 22.00                        | 21.12                  | 21.47        | 21.25      |
|              | 12/0           | 22.00                        | 21.18                  | 21.37        | 21.31        |               | 25/0           | 22.00                        | 21.22                  | 21.40        | 21.39      |
|              | 12/6           | 22.00                        | 21.29                  | 21.46        | 21.33        |               | 25/12          | 22.00                        | 21.30                  | 21.39        | 21.42      |
|              | 12/13          | 22.00                        | 21.33                  | 21.46        | 21.36        |               | 25/25          | 22.00                        | 21.31                  | 21.39        | 21.42      |
|              | 25/0           | 22.00                        | 21.20                  | 21.37        | 21.23        |               | 50/0           | 22.00                        | 21.31                  | 21.39        | 21.39      |
| 64QAM        | 1/0            | 22.00                        | 20.95                  | 21.46        | 21.30        | 64QAM         | 1/0            | 22.00                        | 21.42                  | 21.33        | 21.34      |
|              | 1/12           | 22.00                        | 21.15                  | 21.61        | 21.47        |               | 1/24           | 22.00                        | 21.54                  | 21.59        | 21.56      |
|              | 1/24           | 22.00                        | 21.03                  | 21.50        | 21.35        |               | 1/49           | 22.00                        | 21.45                  | 21.44        | 21.36      |
|              | 12/0           | 22.00                        | 20.11                  | 20.16        | 20.24        |               | 25/0           | 22.00                        | 20.20                  | 20.37        | 20.33      |
|              | 12/6           | 22.00                        | 20.22                  | 20.23        | 20.28        |               | 25/12          | 22.00                        | 20.29                  | 20.36        | 20.31      |
|              | 12/13          | 22.00                        | 20.24                  | 20.21        | 20.30        |               | 25/25          | 22.00                        | 20.30                  | 20.36        | 20.32      |
|              | 25/0           | 22.00                        | 20.10                  | 20.18        | 20.21        |               | 50/0           | 22.00                        | 20.25                  | 20.35        | 20.25      |

| LTE B4/BW=15M |                | Average Conducted Power(dBm) |                        |              |              | LTE B4/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |
|---------------|----------------|------------------------------|------------------------|--------------|--------------|---------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|               |                |                              | 20025/1717.5           | 20175/1732.5 | 20325/1747.5 |               |                |                              | 20050/1720             | 20175/1732.5 | 20300/1745 |
| QPSK          | 1/0            | 22.00                        | 21.29                  | 21.24        | 21.36        | QPSK          | 1/0            | 22.00                        | 21.25                  | 21.27        | 21.54      |
|               | 1/37           | 22.00                        | 21.53                  | 21.40        | 21.23        |               | 1/50           | 22.00                        | <b>21.64</b>           | 21.26        | 21.06      |
|               | 1/74           | 22.00                        | 21.43                  | 21.31        | 21.32        |               | 1/99           | 22.00                        | 21.32                  | 21.35        | 21.34      |
|               | 36/0           | 22.00                        | 20.23                  | 21.31        | 20.26        |               | 50/0           | 22.00                        | 20.20                  | 20.31        | 20.23      |
|               | 36/19          | 22.00                        | 20.27                  | 20.38        | 20.22        |               | 50/25          | 22.00                        | 20.28                  | <b>20.33</b> | 20.27      |
|               | 36/39          | 22.00                        | 20.33                  | 20.34        | 20.22        |               | 50/50          | 22.00                        | 20.26                  | 20.31        | 20.22      |
|               | 75/0           | 22.00                        | 20.23                  | 20.32        | 20.29        |               | 100/0          | 22.00                        | 20.22                  | 20.32        | 20.20      |
| 16QAM         | 1/0            | 22.00                        | 20.94                  | 21.47        | 21.53        | 16QAM         | 1/0            | 22.00                        | 21.34                  | 21.43        | 21.36      |
|               | 1/37           | 22.00                        | 21.14                  | 21.36        | 21.50        |               | 1/50           | 22.00                        | 21.43                  | 21.31        | 21.43      |
|               | 1/74           | 22.00                        | 21.09                  | 21.60        | 21.57        |               | 1/99           | 22.00                        | 21.52                  | 21.54        | 21.42      |
|               | 36/0           | 22.00                        | 21.16                  | 21.60        | 21.22        |               | 50/0           | 22.00                        | 21.22                  | 21.34        | 21.26      |
|               | 36/19          | 22.00                        | 21.24                  | 21.37        | 21.21        |               | 50/25          | 22.00                        | 21.29                  | 21.39        | 21.33      |
|               | 36/39          | 22.00                        | 21.22                  | 21.33        | 21.21        |               | 50/50          | 22.00                        | 21.31                  | 21.31        | 21.25      |
|               | 75/0           | 22.00                        | 21.22                  | 21.32        | 21.22        |               | 100/0          | 22.00                        | 21.27                  | 21.32        | 21.29      |
| 64QAM         | 1/0            | 22.00                        | 20.94                  | 21.13        | 21.08        | 64QAM         | 1/0            | 22.00                        | 20.77                  | 20.89        | 20.89      |
|               | 1/37           | 22.00                        | 21.16                  | 21.30        | 21.18        |               | 1/50           | 22.00                        | 21.34                  | 21.16        | 21.36      |
|               | 1/74           | 22.00                        | 21.09                  | 21.18        | 21.08        |               | 1/99           | 22.00                        | 20.98                  | 20.95        | 20.89      |
|               | 36/0           | 22.00                        | 21.21                  | 21.18        | 21.29        |               | 50/0           | 22.00                        | 21.08                  | 21.27        | 21.19      |
|               | 36/19          | 22.00                        | 21.25                  | 21.37        | 21.27        |               | 50/25          | 22.00                        | 21.16                  | 21.24        | 21.22      |
|               | 36/39          | 22.00                        | 21.29                  | 21.36        | 21.25        |               | 50/50          | 22.00                        | 21.16                  | 21.25        | 21.17      |
|               | 75/0           | 22.00                        | 21.23                  | 21.33        | 21.26        |               | 100/0          | 22.00                        | 21.11                  | 21.26        | 21.19      |

Note: The tested channels are marks in bold.

### 3. Conducted power measurement results of LTE B5

Down Antenna

| LTE B5/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |             | LTE B5/BW=3M |                | Average Conducted Power(dBm) |                        |             |             |
|----------------|----------------|------------------------------|------------------------|-------------|-------------|--------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|                |                |                              | 20407/824.7            | 20525/836.5 | 20643/848.3 |              |                |                              | 20415/825.5            | 20525/836.5 | 20635/847.5 |
| QPSK           | 1/0            | 24.00                        | 22.94                  | 22.91       | 22.88       | QPSK         | 1/0            | 24.00                        | 22.93                  | 22.97       | 22.95       |
|                | 1/2            | 24.00                        | 23.05                  | 23.00       | 23.00       |              | 1/7            | 24.00                        | 23.05                  | 23.05       | 23.04       |
|                | 1/5            | 24.00                        | 22.84                  | 22.89       | 22.91       |              | 1/14           | 24.00                        | 22.96                  | 23.00       | 22.93       |
|                | 3/0            | 24.00                        | 23.00                  | 22.97       | 23.00       |              | 8/0            | 23.00                        | 21.97                  | 21.95       | 21.96       |
|                | 3/1            | 24.00                        | 23.03                  | 23.06       | 23.02       |              | 8/3            | 23.00                        | 21.99                  | 21.99       | 22.00       |
|                | 3/3            | 24.00                        | 22.99                  | 23.04       | 23.01       |              | 8/7            | 23.00                        | 21.94                  | 21.96       | 21.92       |
|                | 6/0            | 23.00                        | 21.96                  | 21.98       | 21.93       |              | 15/0           | 23.00                        | 21.96                  | 21.95       | 21.97       |
| 16QAM          | 1/0            | 23.00                        | 21.93                  | 22.08       | 22.27       | 16QAM        | 1/0            | 23.00                        | 21.96                  | 22.36       | 22.02       |
|                | 1/2            | 23.00                        | 22.03                  | 22.19       | 22.40       |              | 1/7            | 23.00                        | 22.06                  | 22.54       | 22.13       |
|                | 1/5            | 23.00                        | 21.97                  | 22.09       | 22.30       |              | 1/14           | 23.00                        | 21.99                  | 22.38       | 21.99       |
|                | 3/0            | 23.00                        | 22.15                  | 22.08       | 22.22       |              | 8/0            | 22.00                        | 21.11                  | 21.07       | 20.99       |
|                | 3/1            | 23.00                        | 22.21                  | 22.13       | 22.26       |              | 8/3            | 22.00                        | 21.14                  | 21.13       | 21.06       |
|                | 3/3            | 23.00                        | 22.17                  | 22.08       | 22.22       |              | 8/7            | 22.00                        | 21.09                  | 21.07       | 20.99       |
|                | 6/0            | 22.00                        | 21.15                  | 21.14       | 20.90       |              | 15/0           | 22.00                        | 21.02                  | 21.01       | 20.95       |
| 64QAM          | 1/0            | 22.00                        | 21.10                  | 21.11       | 21.32       | 64QAM        | 1/0            | 22.00                        | 21.30                  | 21.10       | 21.14       |
|                | 1/2            | 22.00                        | 21.21                  | 21.19       | 21.50       |              | 1/7            | 22.00                        | 21.46                  | 21.28       | 21.30       |
|                | 1/5            | 22.00                        | 21.06                  | 21.12       | 21.31       |              | 1/14           | 22.00                        | 21.31                  | 21.18       | 21.09       |
|                | 3/0            | 22.00                        | 21.08                  | 20.97       | 21.31       |              | 8/0            | 21.00                        | 20.07                  | 20.00       | 19.89       |
|                | 3/1            | 22.00                        | 21.17                  | 20.93       | 21.34       |              | 8/3            | 21.00                        | 20.11                  | 20.10       | 19.95       |
|                | 3/3            | 22.00                        | 21.16                  | 20.97       | 21.32       |              | 8/7            | 21.00                        | 20.03                  | 20.03       | 19.90       |
|                | 6/0            | 21.00                        | 20.27                  | 20.09       | 19.91       |              | 15/0           | 21.00                        | 19.97                  | 20.00       | 20.03       |

| LTE B5/BW=5M |                | Average Conducted Power(dBm) |                        |             |             | LTE B5/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|--------------|----------------|------------------------------|------------------------|-------------|-------------|---------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|              |                |                              | 20425/826.5            | 20525/836.5 | 20625/846.5 |               |                |                              | 20450/829              | 20525/836.5  | 20600/844 |
| QPSK         | 1/0            | 24.00                        | 22.96                  | 22.85       | 22.91       | QPSK          | 1/0            | 24.00                        | 22.84                  | 22.95        | 22.92     |
|              | 1/12           | 24.00                        | 23.10                  | 23.01       | 23.06       |               | 1/24           | 24.00                        | 23.08                  | <b>23.15</b> | 23.07     |
|              | 1/24           | 24.00                        | 22.97                  | 22.89       | 22.94       |               | 1/49           | 24.00                        | 22.93                  | 23.05        | 22.89     |
|              | 12/0           | 23.00                        | 21.93                  | 21.96       | 21.98       |               | 25/0           | 23.00                        | 21.98                  | 22.04        | 22.03     |
|              | 12/6           | 23.00                        | 22.01                  | 22.00       | 22.01       |               | 25/12          | 23.00                        | 22.02                  | <b>22.08</b> | 22.03     |
|              | 12/13          | 23.00                        | 21.99                  | 22.02       | 21.99       |               | 25/25          | 23.00                        | 22.01                  | 22.07        | 21.94     |
|              | 25/0           | 23.00                        | 21.95                  | 21.99       | 21.94       |               | 50/0           | 23.00                        | 22.03                  | 22.06        | 22.02     |
| 16QAM        | 1/0            | 23.00                        | 22.11                  | 22.40       | 22.00       | 16QAM         | 1/0            | 23.00                        | 21.94                  | 22.35        | 21.90     |
|              | 1/12           | 23.00                        | 22.26                  | 22.53       | 22.09       |               | 1/24           | 23.00                        | 22.11                  | 22.52        | 22.04     |
|              | 1/24           | 23.00                        | 22.11                  | 22.42       | 22.04       |               | 1/49           | 23.00                        | 21.94                  | 22.44        | 21.90     |
|              | 12/0           | 22.00                        | 21.07                  | 21.10       | 21.02       |               | 25/0           | 22.00                        | 21.04                  | 21.09        | 21.04     |
|              | 12/6           | 22.00                        | 21.09                  | 21.12       | 21.04       |               | 25/12          | 22.00                        | 21.06                  | 21.10        | 21.01     |
|              | 12/13          | 22.00                        | 21.08                  | 21.15       | 21.02       |               | 25/25          | 22.00                        | 21.07                  | 21.09        | 20.94     |
|              | 25/0           | 22.00                        | 21.02                  | 21.06       | 20.90       |               | 50/0           | 22.00                        | 21.01                  | 21.09        | 20.97     |
| 64QAM        | 1/0            | 22.00                        | 20.86                  | 21.23       | 21.13       | 64QAM         | 1/0            | 22.00                        | 21.23                  | 21.08        | 21.09     |
|              | 1/12           | 22.00                        | 20.99                  | 21.38       | 21.23       |               | 1/24           | 22.00                        | 21.48                  | 21.29        | 21.29     |
|              | 1/24           | 22.00                        | 20.86                  | 21.24       | 21.13       |               | 1/49           | 22.00                        | 21.28                  | 21.18        | 21.13     |
|              | 12/0           | 21.00                        | 20.02                  | 19.90       | 19.99       |               | 25/0           | 21.00                        | 20.04                  | 20.10        | 20.08     |
|              | 12/6           | 21.00                        | 20.04                  | 19.93       | 20.04       |               | 25/12          | 21.00                        | 20.08                  | 20.10        | 20.14     |
|              | 12/13          | 21.00                        | 20.05                  | 19.94       | 20.00       |               | 25/25          | 21.00                        | 20.07                  | 20.12        | 19.99     |
|              | 25/0           | 21.00                        | 19.96                  | 19.96       | 19.95       |               | 50/0           | 21.00                        | 20.08                  | 20.10        | 20.00     |

Up Antenna Receiver on

| LTE B5/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |             | LTE B5/BW=3M |                | Average Conducted Power(dBm) |                        |             |             |
|----------------|----------------|------------------------------|------------------------|-------------|-------------|--------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|                |                |                              | 20407/824.7            | 20525/836.5 | 20643/848.3 |              |                |                              | 20415/825.5            | 20525/836.5 | 20635/847.5 |
| QPSK           | 1/0            | 24.00                        | 23.12                  | 23.20       | 23.17       | QPSK         | 1/0            | 24.00                        | 23.20                  | 23.24       | 23.22       |
|                | 1/2            | 24.00                        | 23.24                  | 23.31       | 23.31       |              | 1/7            | 24.00                        | 23.32                  | 23.42       | 23.33       |
|                | 1/5            | 24.00                        | 23.18                  | 23.15       | 23.19       |              | 1/14           | 24.00                        | 23.24                  | 23.31       | 23.18       |
|                | 3/0            | 24.00                        | 23.26                  | 23.26       | 23.29       |              | 8/0            | 23.00                        | 22.26                  | 22.22       | 22.22       |
|                | 3/1            | 24.00                        | 23.30                  | 23.31       | 23.31       |              | 8/3            | 23.00                        | 22.27                  | 22.28       | 22.31       |
|                | 3/3            | 24.00                        | 23.31                  | 23.28       | 23.32       |              | 8/7            | 23.00                        | 22.21                  | 22.21       | 22.20       |
|                | 6/0            | 23.00                        | 22.20                  | 22.25       | 22.26       |              | 15/0           | 23.00                        | 22.27                  | 22.24       | 22.25       |
| 16QAM          | 1/0            | 23.00                        | 22.25                  | 22.32       | 22.51       | 16QAM        | 1/0            | 23.00                        | 22.25                  | 22.60       | 22.27       |
|                | 1/2            | 23.00                        | 22.32                  | 22.42       | 22.65       |              | 1/7            | 23.00                        | 22.34                  | 22.77       | 22.38       |
|                | 1/5            | 23.00                        | 22.27                  | 22.34       | 22.57       |              | 1/14           | 23.00                        | 22.26                  | 22.63       | 22.26       |
|                | 3/0            | 23.00                        | 22.43                  | 22.33       | 22.43       |              | 8/0            | 22.00                        | 21.42                  | 21.29       | 21.24       |
|                | 3/1            | 23.00                        | 22.49                  | 22.35       | 22.50       |              | 8/3            | 22.00                        | 21.42                  | 21.38       | 21.33       |
|                | 3/3            | 23.00                        | 22.48                  | 22.31       | 22.47       |              | 8/7            | 22.00                        | 21.38                  | 21.29       | 21.25       |
|                | 6/0            | 22.00                        | 21.44                  | 21.40       | 21.16       |              | 15/0           | 22.00                        | 21.32                  | 21.28       | 21.20       |
| 64QAM          | 1/0            | 22.00                        | 21.58                  | 21.34       | 21.33       | 64QAM        | 1/0            | 22.00                        | 21.55                  | 21.38       | 21.39       |
|                | 1/2            | 22.00                        | 21.77                  | 21.45       | 21.44       |              | 1/7            | 22.00                        | 21.70                  | 21.53       | 21.53       |
|                | 1/5            | 22.00                        | 21.59                  | 21.30       | 21.39       |              | 1/14           | 22.00                        | 21.60                  | 21.43       | 21.34       |
|                | 3/0            | 22.00                        | 21.59                  | 21.34       | 21.19       |              | 8/0            | 21.00                        | 20.32                  | 20.26       | 20.14       |
|                | 3/1            | 22.00                        | 21.64                  | 21.43       | 21.29       |              | 8/3            | 21.00                        | 20.36                  | 20.32       | 20.18       |
|                | 3/3            | 22.00                        | 21.61                  | 21.44       | 21.21       |              | 8/7            | 21.00                        | 20.30                  | 20.27       | 20.12       |
|                | 6/0            | 21.00                        | 20.20                  | 20.55       | 20.31       |              | 15/0           | 21.00                        | 20.25                  | 20.25       | 20.23       |

| LTE B5/BW=5M |                | Average Conducted Power(dBm) |                        |             |             | LTE B5/BW=10M |                | Average Conducted Power(dBm) |                        |              |              |
|--------------|----------------|------------------------------|------------------------|-------------|-------------|---------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|              |                |                              | 20425/826.5            | 20525/836.5 | 20625/846.5 |               |                |                              | 20450/829              | 20525/836.5  | 20600/844    |
| QPSK         | 1/0            | 24.00                        | 23.21                  | 23.14       | 23.18       | QPSK          | 1/0            | 24.00                        | 23.13                  | 23.25        | 23.18        |
|              | 1/12           | 24.00                        | 23.38                  | 23.30       | 23.33       |               | 1/24           | 24.00                        | 23.31                  | <b>23.45</b> | 23.35        |
|              | 1/24           | 24.00                        | 23.25                  | 23.16       | 23.22       |               | 1/49           | 24.00                        | 23.17                  | 23.33        | 23.21        |
|              | 12/0           | 23.00                        | 22.25                  | 22.27       | 22.20       |               | 25/0           | 23.00                        | 22.25                  | 22.30        | <b>22.34</b> |
|              | 12/6           | 23.00                        | 22.27                  | 22.27       | 22.28       |               | 25/12          | 23.00                        | 22.28                  | 22.32        | 22.31        |
|              | 12/13          | 23.00                        | 22.29                  | 22.25       | 22.23       |               | 25/25          | 23.00                        | 22.33                  | 22.23        | 22.28        |
|              | 25/0           | 23.00                        | 22.27                  | 22.25       | 22.16       |               | 50/0           | 23.00                        | 22.31                  | 22.28        | 22.32        |
| 16QAM        | 1/0            | 23.00                        | 22.38                  | 22.65       | 22.27       | 16QAM         | 1/0            | 23.00                        | 22.21                  | 22.58        | 22.18        |
|              | 1/12           | 23.00                        | 22.55                  | 22.79       | 22.35       |               | 1/24           | 23.00                        | 22.38                  | 22.80        | 22.33        |
|              | 1/24           | 23.00                        | 22.44                  | 22.71       | 22.28       |               | 1/49           | 23.00                        | 22.22                  | 22.72        | 22.13        |
|              | 12/0           | 22.00                        | 21.34                  | 21.36       | 21.24       |               | 25/0           | 22.00                        | 21.32                  | 21.32        | 21.35        |
|              | 12/6           | 22.00                        | 21.37                  | 21.36       | 21.32       |               | 25/12          | 22.00                        | 21.36                  | 21.32        | 21.31        |
|              | 12/13          | 22.00                        | 21.39                  | 21.36       | 21.29       |               | 25/25          | 22.00                        | 21.40                  | 21.27        | 21.28        |
|              | 25/0           | 22.00                        | 21.32                  | 21.31       | 21.11       |               | 50/0           | 22.00                        | 21.33                  | 21.29        | 21.27        |
| 64QAM        | 1/0            | 22.00                        | 21.12                  | 21.45       | 21.41       | 64QAM         | 1/0            | 22.00                        | 21.37                  | 21.47        | 21.35        |
|              | 1/12           | 22.00                        | 21.27                  | 21.59       | 21.49       |               | 1/24           | 22.00                        | 21.60                  | 21.73        | 21.58        |
|              | 1/24           | 22.00                        | 21.15                  | 21.50       | 21.40       |               | 1/49           | 22.00                        | 21.39                  | 21.62        | 21.36        |
|              | 12/0           | 21.00                        | 20.31                  | 20.18       | 20.21       |               | 25/0           | 21.00                        | 20.32                  | 20.34        | 20.42        |
|              | 12/6           | 21.00                        | 20.32                  | 20.18       | 20.28       |               | 25/12          | 21.00                        | 20.37                  | 20.34        | 20.43        |
|              | 12/13          | 21.00                        | 20.33                  | 20.18       | 20.26       |               | 25/25          | 21.00                        | 20.39                  | 20.27        | 20.33        |
|              | 25/0           | 21.00                        | 20.24                  | 20.22       | 20.15       |               | 50/0           | 21.00                        | 20.34                  | 20.27        | 20.36        |

Up Antenna Receiver off

| LTE B5/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |             | LTE B5/BW=3M |                | Average Conducted Power(dBm) |                        |             |             |
|----------------|----------------|------------------------------|------------------------|-------------|-------------|--------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|                |                |                              | 20407/824.7            | 20525/836.5 | 20643/848.3 |              |                |                              | 20415/825.5            | 20525/836.5 | 20635/847.5 |
| QPSK           | 1/0            | 24.00                        | 23.10                  | 23.24       | 23.17       | QPSK         | 1/0            | 24.00                        | 23.16                  | 23.25       | 23.22       |
|                | 1/2            | 24.00                        | 23.25                  | 23.33       | 23.32       |              | 1/7            | 24.00                        | 23.29                  | 23.43       | 23.32       |
|                | 1/5            | 24.00                        | 23.17                  | 23.23       | 23.19       |              | 1/14           | 24.00                        | 23.24                  | 23.27       | 23.20       |
|                | 3/0            | 24.00                        | 23.26                  | 23.27       | 23.28       |              | 8/0            | 23.00                        | 22.23                  | 22.23       | 22.23       |
|                | 3/1            | 24.00                        | 23.32                  | 23.31       | 23.36       |              | 8/3            | 23.00                        | 22.26                  | 22.30       | 22.30       |
|                | 3/3            | 24.00                        | 23.33                  | 23.27       | 23.26       |              | 8/7            | 23.00                        | 22.18                  | 22.21       | 22.21       |
|                | 6/0            | 23.00                        | 22.22                  | 22.26       | 22.27       |              | 15/0           | 23.00                        | 22.26                  | 22.24       | 22.24       |
| 16QAM          | 1/0            | 23.00                        | 22.24                  | 22.32       | 22.51       | 16QAM        | 1/0            | 23.00                        | 22.24                  | 22.65       | 22.28       |
|                | 1/2            | 23.00                        | 22.36                  | 22.42       | 22.67       |              | 1/7            | 23.00                        | 22.35                  | 22.77       | 22.40       |
|                | 1/5            | 23.00                        | 22.27                  | 22.31       | 22.57       |              | 1/14           | 23.00                        | 22.26                  | 22.64       | 22.27       |
|                | 3/0            | 23.00                        | 22.49                  | 22.30       | 22.45       |              | 8/0            | 22.00                        | 21.40                  | 21.32       | 21.27       |
|                | 3/1            | 23.00                        | 22.53                  | 22.34       | 22.50       |              | 8/3            | 22.00                        | 21.42                  | 21.39       | 21.33       |
|                | 3/3            | 23.00                        | 22.47                  | 22.30       | 22.51       |              | 8/7            | 22.00                        | 21.36                  | 21.30       | 21.26       |
|                | 6/0            | 22.00                        | 21.44                  | 21.38       | 21.18       |              | 15/0           | 22.00                        | 21.33                  | 21.28       | 21.19       |
| 64QAM          | 1/0            | 22.00                        | 21.35                  | 21.32       | 21.58       | 64QAM        | 1/0            | 22.00                        | 21.59                  | 21.34       | 21.41       |
|                | 1/2            | 22.00                        | 21.50                  | 21.45       | 21.77       |              | 1/7            | 22.00                        | 21.73                  | 21.52       | 21.55       |
|                | 1/5            | 22.00                        | 21.35                  | 21.35       | 21.62       |              | 1/14           | 22.00                        | 21.61                  | 21.43       | 21.37       |
|                | 3/0            | 22.00                        | 21.41                  | 21.20       | 21.56       |              | 8/0            | 21.00                        | 20.35                  | 20.26       | 20.16       |
|                | 3/1            | 22.00                        | 21.43                  | 21.27       | 21.60       |              | 8/3            | 21.00                        | 20.37                  | 20.33       | 20.20       |
|                | 3/3            | 22.00                        | 21.41                  | 21.23       | 21.60       |              | 8/7            | 21.00                        | 20.32                  | 20.29       | 20.12       |
|                | 6/0            | 21.00                        | 20.54                  | 20.32       | 20.20       |              | 15/0           | 21.00                        | 20.26                  | 20.23       | 20.24       |

| LTE B5/BW=5M |                | Average Conducted Power(dBm) |                        |             |             | LTE B5/BW=10M |                | Average Conducted Power(dBm) |                        |              |              |
|--------------|----------------|------------------------------|------------------------|-------------|-------------|---------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|              |                |                              | 20425/826.5            | 20525/836.5 | 20625/846.5 |               |                |                              | 20450/829              | 20525/836.5  | 20600/844    |
| QPSK         | 1/0            | 24.00                        | 23.23                  | 23.16       | 23.19       | QPSK          | 1/0            | 24.00                        | 23.14                  | 23.24        | 23.17        |
|              | 1/12           | 24.00                        | 23.40                  | 23.35       | 23.32       |               | 1/24           | 24.00                        | 23.34                  | <b>23.47</b> | 23.37        |
|              | 1/24           | 24.00                        | 23.25                  | 23.16       | 23.21       |               | 1/49           | 24.00                        | 23.20                  | 23.29        | 23.22        |
|              | 12/0           | 23.00                        | 22.26                  | 22.28       | 22.23       |               | 25/0           | 23.00                        | 22.25                  | 22.30        | <b>22.35</b> |
|              | 12/6           | 23.00                        | 22.27                  | 22.27       | 22.30       |               | 25/12          | 23.00                        | 22.32                  | 22.31        | 22.31        |
|              | 12/13          | 23.00                        | 22.28                  | 22.26       | 22.26       |               | 25/25          | 23.00                        | 22.33                  | 22.22        | 22.25        |
|              | 25/0           | 23.00                        | 22.26                  | 22.25       | 22.17       |               | 50/0           | 23.00                        | 22.37                  | 22.31        | 22.32        |
| 16QAM        | 1/0            | 23.00                        | 22.40                  | 22.63       | 22.30       | 16QAM         | 1/0            | 23.00                        | 22.20                  | 22.16        | 22.65        |
|              | 1/12           | 23.00                        | 22.55                  | 22.78       | 22.36       |               | 1/24           | 23.00                        | 22.37                  | 22.32        | 22.83        |
|              | 1/24           | 23.00                        | 22.40                  | 22.70       | 22.30       |               | 1/49           | 23.00                        | 22.22                  | 22.25        | 22.61        |
|              | 12/0           | 22.00                        | 21.33                  | 21.37       | 21.25       |               | 25/0           | 22.00                        | 21.28                  | 21.24        | 21.46        |
|              | 12/6           | 22.00                        | 21.38                  | 21.37       | 21.34       |               | 25/12          | 22.00                        | 21.35                  | 21.28        | 21.41        |
|              | 12/13          | 22.00                        | 21.39                  | 21.37       | 21.29       |               | 25/25          | 22.00                        | 21.40                  | 21.19        | 21.32        |
|              | 25/0           | 22.00                        | 21.33                  | 21.30       | 21.14       |               | 50/0           | 22.00                        | 21.33                  | 21.25        | 21.39        |
| 64QAM        | 1/0            | 22.00                        | 21.12                  | 21.45       | 21.40       | 64QAM         | 1/0            | 22.00                        | 21.50                  | 21.36        | 21.44        |
|              | 1/12           | 22.00                        | 21.30                  | 21.61       | 21.48       |               | 1/24           | 22.00                        | 21.73                  | 21.58        | 21.60        |
|              | 1/24           | 22.00                        | 21.17                  | 21.52       | 21.41       |               | 1/49           | 22.00                        | 21.53                  | 21.48        | 21.39        |
|              | 12/0           | 21.00                        | 20.31                  | 20.18       | 20.22       |               | 25/0           | 21.00                        | 20.29                  | 20.35        | 20.38        |
|              | 12/6           | 21.00                        | 20.32                  | 20.18       | 20.29       |               | 25/12          | 21.00                        | 20.36                  | 20.36        | 20.41        |
|              | 12/13          | 21.00                        | 20.33                  | 20.17       | 20.25       |               | 25/25          | 21.00                        | 20.39                  | 20.31        | 20.32        |
|              | 25/0           | 21.00                        | 20.27                  | 20.17       | 20.15       |               | 50/0           | 21.00                        | 20.37                  | 20.31        | 20.32        |

Note:

- 1) The tested channels are marks in bold.
- 2) The receiver on/off power of LTE B5 Down Antenna are the same.

## 4. Conducted power measurement results of LTE B7

Down Antenna\_Receiver on

| LTE B7/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B7/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|--------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|              |                |                              | 20775/2502.5           | 21100/2535 | 21425/2567.5 |               |                |                              | 20800/2505             | 21100/2535 | 21400/2565 |
| QPSK         | 1/0            | 24.00                        | 22.88                  | 22.88      | 22.81        | QPSK          | 1/0            | 24.00                        | 22.93                  | 22.92      | 22.83      |
|              | 1/12           | 24.00                        | 22.99                  | 22.98      | 22.99        |               | 1/24           | 24.00                        | 23.09                  | 23.05      | 23.07      |
|              | 1/24           | 24.00                        | 22.89                  | 22.89      | 22.91        |               | 1/49           | 24.00                        | 22.97                  | 22.90      | 22.96      |
|              | 12/0           | 23.00                        | 21.92                  | 21.89      | 21.99        |               | 25/0           | 23.00                        | 21.96                  | 21.96      | 21.97      |
|              | 12/6           | 23.00                        | 21.97                  | 21.93      | 22.02        |               | 25/12          | 23.00                        | 22.01                  | 21.96      | 22.02      |
|              | 12/13          | 23.00                        | 22.00                  | 21.91      | 22.05        |               | 25/25          | 23.00                        | 22.12                  | 21.97      | 22.02      |
|              | 25/0           | 23.00                        | 21.97                  | 21.89      | 21.95        |               | 50/0           | 23.00                        | 22.09                  | 22.01      | 22.03      |
| 16QAM        | 1/0            | 23.00                        | 21.90                  | 21.97      | 22.32        | 16QAM         | 1/0            | 23.00                        | 21.80                  | 22.26      | 21.87      |
|              | 1/12           | 23.00                        | 22.03                  | 22.08      | 22.49        |               | 1/24           | 23.00                        | 22.04                  | 22.40      | 22.09      |
|              | 1/24           | 23.00                        | 21.90                  | 21.97      | 22.41        |               | 1/49           | 23.00                        | 21.93                  | 22.24      | 21.97      |
|              | 12/0           | 22.00                        | 20.96                  | 21.01      | 21.09        |               | 25/0           | 22.00                        | 21.05                  | 21.07      | 21.12      |
|              | 12/6           | 22.00                        | 21.04                  | 21.05      | 21.17        |               | 25/12          | 22.00                        | 21.08                  | 21.03      | 21.16      |
|              | 12/13          | 22.00                        | 21.09                  | 21.06      | 21.18        |               | 25/25          | 22.00                        | 21.19                  | 21.09      | 21.16      |
|              | 25/0           | 22.00                        | 20.95                  | 20.96      | 21.08        |               | 50/0           | 22.00                        | 21.11                  | 21.06      | 21.10      |
| 64QAM        | 1/0            | 22.00                        | 21.15                  | 21.08      | 20.83        | 64QAM         | 1/0            | 22.00                        | 21.23                  | 21.06      | 21.07      |
|              | 1/12           | 22.00                        | 21.27                  | 21.13      | 20.96        |               | 1/24           | 22.00                        | 21.43                  | 21.23      | 21.22      |
|              | 1/24           | 22.00                        | 21.17                  | 21.06      | 20.90        |               | 1/49           | 22.00                        | 21.32                  | 21.07      | 21.12      |
|              | 12/0           | 21.00                        | 19.79                  | 19.91      | 20.01        |               | 25/0           | 21.00                        | 19.96                  | 20.00      | 20.03      |
|              | 12/6           | 21.00                        | 19.87                  | 19.97      | 20.03        |               | 25/12          | 21.00                        | 19.98                  | 19.99      | 20.12      |
|              | 12/13          | 21.00                        | 19.89                  | 19.96      | 20.08        |               | 25/25          | 21.00                        | 20.11                  | 20.03      | 20.10      |
|              | 25/0           | 21.00                        | 19.84                  | 19.90      | 19.95        |               | 50/0           | 21.00                        | 19.98                  | 19.98      | 20.02      |

| LTE B7/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B7/BW=20M |                | Average Conducted Power(dBm) |                        |            |            |
|---------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|               |                |                              | 20825/2507.5           | 21100/2535 | 21375/2562.5 |               |                |                              | 20850/2510             | 21100/2535 | 21350/2560 |
| QPSK          | 1/0            | 24.00                        | 22.86                  | 22.87      | 22.82        | QPSK          | 1/0            | 24.00                        | 22.69                  | 22.63      | 22.59      |
|               | 1/37           | 24.00                        | 23.01                  | 22.97      | 22.98        |               | 1/50           | 24.00                        | <b>23.09</b>           | 23.03      | 23.04      |
|               | 1/74           | 24.00                        | 22.83                  | 22.83      | 22.96        |               | 1/99           | 24.00                        | 22.69                  | 22.56      | 22.74      |
|               | 36/0           | 23.00                        | 22.00                  | 22.01      | 21.95        |               | 50/0           | 23.00                        | 21.93                  | 21.93      | 21.93      |
|               | 36/19          | 23.00                        | 22.08                  | 22.05      | 22.01        |               | 50/25          | 23.00                        | <b>22.06</b>           | 21.96      | 22.00      |
|               | 36/39          | 23.00                        | 22.10                  | 21.98      | 22.06        |               | 50/50          | 23.00                        | 22.05                  | 21.89      | 21.97      |
|               | 75/0           | 23.00                        | 22.12                  | 21.99      | 21.99        |               | 100/0          | 23.00                        | 21.97                  | 21.88      | 21.92      |
| 16QAM         | 1/0            | 23.00                        | 21.76                  | 22.18      | 22.23        | 16QAM         | 1/0            | 23.00                        | 22.16                  | 22.12      | 22.10      |
|               | 1/37           | 23.00                        | 21.96                  | 22.33      | 22.33        |               | 1/50           | 23.00                        | 22.62                  | 22.46      | 22.52      |
|               | 1/74           | 23.00                        | 21.80                  | 22.16      | 22.31        |               | 1/99           | 23.00                        | 22.23                  | 22.08      | 22.24      |
|               | 36/0           | 22.00                        | 20.96                  | 21.04      | 20.91        |               | 50/0           | 22.00                        | 21.02                  | 21.01      | 20.98      |
|               | 36/19          | 22.00                        | 21.08                  | 21.02      | 20.99        |               | 50/25          | 22.00                        | 21.15                  | 21.04      | 21.04      |
|               | 36/39          | 22.00                        | 21.07                  | 21.01      | 20.99        |               | 50/50          | 22.00                        | 21.15                  | 21.01      | 21.03      |
|               | 75/0           | 22.00                        | 21.11                  | 21.02      | 21.00        |               | 100/0          | 22.00                        | 21.06                  | 20.96      | 21.00      |
| 64QAM         | 1/0            | 22.00                        | 21.21                  | 21.00      | 21.41        | 64QAM         | 1/0            | 22.00                        | 21.03                  | 21.28      | 20.88      |
|               | 1/37           | 22.00                        | 21.34                  | 21.11      | 21.53        |               | 1/50           | 22.00                        | 21.50                  | 21.68      | 21.31      |
|               | 1/74           | 22.00                        | 21.26                  | 20.94      | 21.49        |               | 1/99           | 22.00                        | 21.07                  | 21.32      | 20.96      |
|               | 36/0           | 21.00                        | 20.01                  | 20.06      | 19.95        |               | 50/0           | 21.00                        | 19.92                  | 19.92      | 19.93      |
|               | 36/19          | 21.00                        | 20.08                  | 20.05      | 20.01        |               | 50/25          | 21.00                        | 20.05                  | 19.94      | 20.02      |
|               | 36/39          | 21.00                        | 20.10                  | 20.02      | 20.05        |               | 50/50          | 21.00                        | 20.07                  | 19.93      | 19.98      |
|               | 75/0           | 21.00                        | 20.05                  | 20.00      | 20.05        |               | 100/0          | 21.00                        | 19.96                  | 19.89      | 19.97      |

Down Antenna Receiver off

| LTE B7/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B7/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|--------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|              |                |                              | 20775/2502.5           | 21100/2535 | 21425/2567.5 |               |                |                              | 20800/2505             | 21100/2535 | 21400/2565 |
| QPSK         | 1/0            | 21.50                        | 20.51                  | 20.51      | 20.48        | QPSK          | 1/0            | 21.50                        | 20.56                  | 20.58      | 20.46      |
|              | 1/12           | 21.50                        | 20.63                  | 20.61      | 20.62        |               | 1/24           | 21.50                        | 20.72                  | 20.73      | 20.66      |
|              | 1/24           | 21.50                        | 20.52                  | 20.49      | 20.53        |               | 1/49           | 21.50                        | 20.61                  | 20.54      | 20.59      |
|              | 12/0           | 21.50                        | 20.54                  | 20.48      | 20.58        |               | 25/0           | 21.50                        | 20.60                  | 20.54      | 20.56      |
|              | 12/6           | 21.50                        | 20.59                  | 20.53      | 20.65        |               | 25/12          | 21.50                        | 20.58                  | 20.54      | 20.61      |
|              | 12/13          | 21.50                        | 20.60                  | 20.53      | 20.64        |               | 25/25          | 21.50                        | 20.69                  | 20.56      | 20.64      |
|              | 25/0           | 21.50                        | 20.53                  | 20.49      | 20.54        |               | 50/0           | 21.50                        | 20.59                  | 20.55      | 20.58      |
| 16QAM        | 1/0            | 21.50                        | 20.55                  | 20.55      | 20.94        | 16QAM         | 1/0            | 21.50                        | 20.42                  | 20.79      | 20.51      |
|              | 1/12           | 21.50                        | 20.61                  | 20.65      | 21.10        |               | 1/24           | 21.50                        | 20.60                  | 20.95      | 20.70      |
|              | 1/24           | 21.50                        | 20.53                  | 20.56      | 20.99        |               | 1/49           | 21.50                        | 20.48                  | 20.81      | 20.60      |
|              | 12/0           | 21.50                        | 20.48                  | 20.52      | 20.68        |               | 25/0           | 21.50                        | 20.49                  | 20.53      | 20.64      |
|              | 12/6           | 21.50                        | 20.56                  | 20.54      | 20.72        |               | 25/12          | 21.50                        | 20.55                  | 20.53      | 20.71      |
|              | 12/13          | 21.50                        | 20.56                  | 20.56      | 20.72        |               | 25/25          | 21.50                        | 20.64                  | 20.53      | 20.72      |
|              | 25/0           | 21.50                        | 20.43                  | 20.46      | 20.64        |               | 50/0           | 21.50                        | 20.52                  | 20.53      | 20.62      |
| 64QAM        | 1/0            | 21.50                        | 20.67                  | 20.61      | 20.40        | 64QAM         | 1/0            | 21.50                        | 20.78                  | 20.57      | 20.65      |
|              | 1/12           | 21.50                        | 20.81                  | 20.72      | 20.52        |               | 1/24           | 21.50                        | 20.92                  | 20.70      | 20.86      |
|              | 1/24           | 21.50                        | 20.69                  | 20.61      | 20.46        |               | 1/49           | 21.50                        | 20.82                  | 20.59      | 20.71      |
|              | 12/0           | 21.50                        | 19.90                  | 19.99      | 20.10        |               | 25/0           | 21.50                        | 20.00                  | 20.09      | 20.12      |
|              | 12/6           | 21.50                        | 19.97                  | 20.04      | 20.11        |               | 25/12          | 21.50                        | 20.09                  | 20.06      | 20.18      |
|              | 12/13          | 21.50                        | 20.00                  | 20.03      | 20.12        |               | 25/25          | 21.50                        | 20.16                  | 20.07      | 20.15      |
|              | 25/0           | 21.50                        | 19.94                  | 19.96      | 20.01        |               | 50/0           | 21.50                        | 20.04                  | 20.04      | 20.09      |

| LTE B7/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B7/BW=20M |                | Average Conducted Power(dBm) |                        |            |              |
|---------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|--------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              |
|               |                |                              | 20825/2507.5           | 21100/2535 | 21375/2562.5 |               |                |                              | 20850/2510             | 21100/2535 | 21350/2560   |
| QPSK          | 1/0            | 21.50                        | 20.49                  | 20.49      | 20.44        | QPSK          | 1/0            | 21.50                        | 20.76                  | 20.69      | 20.72        |
|               | 1/37           | 21.50                        | 20.60                  | 20.60      | 20.59        |               | 1/50           | 21.50                        | 21.12                  | 21.06      | <b>21.15</b> |
|               | 1/74           | 21.50                        | 20.49                  | 20.45      | 20.56        |               | 1/99           | 21.50                        | 20.76                  | 20.70      | 20.84        |
|               | 36/0           | 21.50                        | 20.66                  | 20.63      | 20.54        |               | 50/0           | 21.50                        | 20.44                  | 20.48      | 20.49        |
|               | 36/19          | 21.50                        | 20.69                  | 20.64      | 20.59        |               | 50/25          | 21.50                        | <b>20.59</b>           | 20.51      | 20.57        |
|               | 36/39          | 21.50                        | 20.71                  | 20.59      | 20.67        |               | 50/50          | 21.50                        | 20.56                  | 20.45      | 20.56        |
|               | 75/0           | 21.50                        | 20.67                  | 20.60      | 20.58        |               | 100/0          | 21.50                        | 20.53                  | 20.43      | 20.55        |
| 16QAM         | 1/0            | 21.50                        | 20.35                  | 20.75      | 20.83        | 16QAM         | 1/0            | 21.50                        | 20.33                  | 20.32      | 20.24        |
|               | 1/37           | 21.50                        | 20.48                  | 20.85      | 20.97        |               | 1/50           | 21.50                        | 20.75                  | 20.69      | 20.65        |
|               | 1/74           | 21.50                        | 20.39                  | 20.73      | 20.92        |               | 1/99           | 21.50                        | 20.32                  | 20.26      | 20.36        |
|               | 36/0           | 21.50                        | 20.53                  | 20.60      | 20.50        |               | 50/0           | 21.50                        | 20.45                  | 20.50      | 20.51        |
|               | 36/19          | 21.50                        | 20.64                  | 20.63      | 20.54        |               | 50/25          | 21.50                        | 20.60                  | 20.52      | 20.59        |
|               | 36/39          | 21.50                        | 20.65                  | 20.60      | 20.59        |               | 50/50          | 21.50                        | 20.62                  | 20.50      | 20.58        |
|               | 75/0           | 21.50                        | 20.62                  | 20.57      | 20.55        |               | 100/0          | 21.50                        | 20.55                  | 20.49      | 20.54        |
| 64QAM         | 1/0            | 21.50                        | 20.69                  | 20.55      | 20.95        | 64QAM         | 1/0            | 21.50                        | 20.48                  | 20.81      | 20.42        |
|               | 1/37           | 21.50                        | 20.87                  | 20.61      | 21.10        |               | 1/50           | 21.50                        | 20.99                  | 20.99      | 20.85        |
|               | 1/74           | 21.50                        | 20.75                  | 20.46      | 21.04        |               | 1/99           | 21.50                        | 20.52                  | 20.79      | 20.57        |
|               | 36/0           | 21.50                        | 20.06                  | 20.08      | 19.99        |               | 50/0           | 21.50                        | 19.95                  | 19.96      | 20.00        |
|               | 36/19          | 21.50                        | 20.14                  | 20.11      | 20.06        |               | 50/25          | 21.50                        | 20.09                  | 19.98      | 20.09        |
|               | 36/39          | 21.50                        | 20.17                  | 20.10      | 20.10        |               | 50/50          | 21.50                        | 20.11                  | 19.97      | 20.06        |
|               | 75/0           | 21.50                        | 20.12                  | 20.04      | 20.08        |               | 100/0          | 21.50                        | 20.01                  | 19.93      | 20.03        |

Up Antenna Receiver on

| LTE B7/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B7/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|--------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|              |                |                              | 20775/2502.5           | 21100/2535 | 21425/2567.5 |               |                |                              | 20800/2505             | 21100/2535 | 21400/2565 |
| QPSK         | 1/0            | 17.00                        | 16.38                  | 16.28      | 16.28        | QPSK          | 1/0            | 17.00                        | 16.35                  | 16.41      | 16.24      |
|              | 1/12           | 17.00                        | 16.48                  | 16.36      | 16.45        |               | 1/24           | 17.00                        | 16.53                  | 16.55      | 16.47      |
|              | 1/24           | 17.00                        | 16.38                  | 16.28      | 16.35        |               | 1/49           | 17.00                        | 16.43                  | 16.35      | 16.33      |
|              | 12/0           | 17.00                        | 16.35                  | 16.30      | 16.33        |               | 25/0           | 17.00                        | 16.34                  | 16.33      | 16.30      |
|              | 12/6           | 17.00                        | 16.42                  | 16.38      | 16.38        |               | 25/12          | 17.00                        | 16.43                  | 16.35      | 16.38      |
|              | 12/13          | 17.00                        | 16.43                  | 16.37      | 16.41        |               | 25/25          | 17.00                        | 16.47                  | 16.36      | 16.36      |
|              | 25/0           | 17.00                        | 16.37                  | 16.29      | 16.31        |               | 50/0           | 17.00                        | 16.41                  | 16.35      | 16.32      |
| 16QAM        | 1/0            | 17.00                        | 16.38                  | 16.43      | 16.73        | 16QAM         | 1/0            | 17.00                        | 16.30                  | 16.70      | 16.26      |
|              | 1/12           | 17.00                        | 16.54                  | 16.55      | 16.58        |               | 1/24           | 17.00                        | 16.47                  | 16.34      | 16.49      |
|              | 1/24           | 17.00                        | 16.44                  | 16.42      | 16.79        |               | 1/49           | 17.00                        | 16.37                  | 16.66      | 16.38      |
|              | 12/0           | 17.00                        | 16.35                  | 16.34      | 16.43        |               | 25/0           | 17.00                        | 16.35                  | 16.37      | 16.35      |
|              | 12/6           | 17.00                        | 16.45                  | 16.40      | 16.49        |               | 25/12          | 17.00                        | 16.43                  | 16.40      | 16.48      |
|              | 12/13          | 17.00                        | 16.47                  | 16.40      | 16.51        |               | 25/25          | 17.00                        | 16.52                  | 16.37      | 16.44      |
|              | 25/0           | 17.00                        | 16.28                  | 16.32      | 16.39        |               | 50/0           | 17.00                        | 16.38                  | 16.38      | 16.36      |
| 64QAM        | 1/0            | 17.00                        | 16.56                  | 16.48      | 16.21        | 64QAM         | 1/0            | 17.00                        | 16.63                  | 16.46      | 16.43      |
|              | 1/12           | 17.00                        | 16.72                  | 16.62      | 16.32        |               | 1/24           | 17.00                        | 16.76                  | 16.62      | 16.68      |
|              | 1/24           | 17.00                        | 16.62                  | 16.49      | 16.24        |               | 1/49           | 17.00                        | 16.72                  | 16.41      | 16.55      |
|              | 12/0           | 17.00                        | 16.26                  | 16.33      | 16.34        |               | 25/0           | 17.00                        | 16.36                  | 16.39      | 16.40      |
|              | 12/6           | 17.00                        | 16.34                  | 16.43      | 16.42        |               | 25/12          | 17.00                        | 16.45                  | 16.44      | 16.46      |
|              | 12/13          | 17.00                        | 16.33                  | 16.40      | 16.42        |               | 25/25          | 17.00                        | 16.51                  | 16.42      | 16.45      |
|              | 25/0           | 17.00                        | 16.30                  | 16.30      | 16.27        |               | 50/0           | 17.00                        | 16.42                  | 16.39      | 16.35      |

| LTE B7/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B7/BW=20M |                | Average Conducted Power(dBm) |                        |            |            |
|---------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|               |                |                              | 20825/2507.5           | 21100/2535 | 21375/2562.5 |               |                |                              | 20850/2510             | 21100/2535 | 21350/2560 |
| QPSK          | 1/0            | 17.00                        | 16.30                  | 16.30      | 16.20        | QPSK          | 1/0            | 17.00                        | 16.35                  | 16.32      | 16.19      |
|               | 1/37           | 17.00                        | 16.42                  | 16.46      | 16.37        |               | 1/50           | 17.00                        | <b>16.82</b>           | 16.71      | 16.63      |
|               | 1/74           | 17.00                        | 16.33                  | 16.26      | 16.31        |               | 1/99           | 17.00                        | 16.38                  | 16.27      | 16.30      |
|               | 36/0           | 17.00                        | 16.42                  | 16.43      | 16.29        |               | 50/0           | 17.00                        | 16.35                  | 16.35      | 16.28      |
|               | 36/19          | 17.00                        | 16.53                  | 16.44      | 16.37        |               | 50/25          | 17.00                        | <b>16.46</b>           | 16.37      | 16.34      |
|               | 36/39          | 17.00                        | 16.48                  | 16.39      | 16.38        |               | 50/50          | 17.00                        | 16.34                  | 16.30      | 16.31      |
|               | 75/0           | 17.00                        | 16.47                  | 16.38      | 16.30        |               | 100/0          | 17.00                        | 16.43                  | 16.31      | 16.33      |
| 16QAM         | 1/0            | 17.00                        | 16.22                  | 16.65      | 16.63        | 16QAM         | 1/0            | 17.00                        | 16.61                  | 16.62      | 16.52      |
|               | 1/37           | 17.00                        | 16.42                  | 16.73      | 16.82        |               | 1/50           | 17.00                        | 16.68                  | 16.52      | 16.56      |
|               | 1/74           | 17.00                        | 16.28                  | 16.58      | 16.74        |               | 1/99           | 17.00                        | 16.63                  | 16.56      | 16.62      |
|               | 36/0           | 17.00                        | 16.38                  | 16.40      | 16.25        |               | 50/0           | 17.00                        | 16.36                  | 16.38      | 16.35      |
|               | 36/19          | 17.00                        | 16.45                  | 16.44      | 16.32        |               | 50/25          | 17.00                        | 16.45                  | 16.39      | 16.38      |
|               | 36/39          | 17.00                        | 16.45                  | 16.40      | 16.34        |               | 50/50          | 17.00                        | 16.47                  | 16.31      | 16.35      |
|               | 75/0           | 17.00                        | 16.45                  | 16.38      | 16.29        |               | 100/0          | 17.00                        | 16.45                  | 16.38      | 16.32      |
| 64QAM         | 1/0            | 17.00                        | 16.61                  | 16.42      | 16.76        | 64QAM         | 1/0            | 17.00                        | 16.43                  | 16.71      | 16.24      |
|               | 1/37           | 17.00                        | 16.77                  | 16.52      | 16.65        |               | 1/50           | 17.00                        | 16.68                  | 16.61      | 16.67      |
|               | 1/74           | 17.00                        | 16.63                  | 16.35      | 16.49        |               | 1/99           | 17.00                        | 16.49                  | 16.66      | 16.36      |
|               | 36/0           | 17.00                        | 16.42                  | 16.45      | 16.29        |               | 50/0           | 17.00                        | 16.41                  | 16.36      | 16.31      |
|               | 36/19          | 17.00                        | 16.49                  | 16.46      | 16.35        |               | 50/25          | 17.00                        | 16.52                  | 16.44      | 16.39      |
|               | 36/39          | 17.00                        | 16.49                  | 16.42      | 16.39        |               | 50/50          | 17.00                        | 16.52                  | 16.34      | 16.38      |
|               | 75/0           | 17.00                        | 16.44                  | 16.39      | 16.34        |               | 100/0          | 17.00                        | 16.47                  | 16.36      | 16.38      |

Up Antenna Receiver off

| LTE B7/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B7/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|--------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation   | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|              |                |                              | 20775/2502.5           | 21100/2535 | 21425/2567.5 |               |                |                              | 20800/2505             | 21100/2535 | 21400/2565 |
| QPSK         | 1/0            | 18.00                        | 17.81                  | 17.65      | 17.65        | QPSK          | 1/0            | 18.00                        | 17.80                  | 17.74      | 17.66      |
|              | 1/12           | 18.00                        | 17.81                  | 17.75      | 17.79        |               | 1/24           | 18.00                        | 17.87                  | 17.77      | 17.77      |
|              | 1/24           | 18.00                        | 17.84                  | 17.66      | 17.72        |               | 1/49           | 18.00                        | 17.86                  | 17.73      | 17.77      |
|              | 12/0           | 18.00                        | 17.76                  | 17.73      | 17.70        |               | 25/0           | 18.00                        | 17.84                  | 17.75      | 17.73      |
|              | 12/6           | 18.00                        | 17.84                  | 17.72      | 17.77        |               | 25/12          | 18.00                        | 17.64                  | 17.77      | 17.83      |
|              | 12/13          | 18.00                        | 17.86                  | 17.77      | 17.80        |               | 25/25          | 18.00                        | 17.71                  | 17.79      | 17.79      |
|              | 25/0           | 18.00                        | 17.87                  | 17.76      | 17.74        |               | 50/0           | 18.00                        | 17.85                  | 17.75      | 17.74      |
| 16QAM        | 1/0            | 18.00                        | 17.64                  | 17.76      | 17.83        | 16QAM         | 1/0            | 18.00                        | 17.75                  | 17.66      | 17.79      |
|              | 1/12           | 18.00                        | 17.78                  | 17.86      | 17.71        |               | 1/24           | 18.00                        | 17.83                  | 17.70      | 17.77      |
|              | 1/24           | 18.00                        | 17.70                  | 17.76      | 17.78        |               | 1/49           | 18.00                        | 17.82                  | 17.80      | 17.73      |
|              | 12/0           | 18.00                        | 17.81                  | 17.69      | 17.77        |               | 25/0           | 18.00                        | 17.81                  | 17.78      | 17.67      |
|              | 12/6           | 18.00                        | 17.90                  | 17.76      | 17.84        |               | 25/12          | 18.00                        | 17.89                  | 17.80      | 17.76      |
|              | 12/13          | 18.00                        | 17.88                  | 17.74      | 17.86        |               | 25/25          | 18.00                        | 17.64                  | 17.79      | 17.72      |
|              | 25/0           | 18.00                        | 17.83                  | 17.72      | 17.77        |               | 50/0           | 18.00                        | 17.81                  | 17.73      | 17.72      |
| 64QAM        | 1/0            | 18.00                        | 17.64                  | 17.78      | 17.79        | 64QAM         | 1/0            | 18.00                        | 17.85                  | 17.72      | 17.90      |
|              | 1/12           | 18.00                        | 17.77                  | 17.71      | 17.79        |               | 1/24           | 18.00                        | 17.64                  | 17.80      | 17.69      |
|              | 1/24           | 18.00                        | 17.68                  | 17.88      | 17.71        |               | 1/49           | 18.00                        | 17.79                  | 17.73      | 17.67      |
|              | 12/0           | 18.00                        | 17.67                  | 17.68      | 17.69        |               | 25/0           | 18.00                        | 17.78                  | 17.77      | 17.77      |
|              | 12/6           | 18.00                        | 17.79                  | 17.74      | 17.75        |               | 25/12          | 18.00                        | 17.75                  | 17.79      | 17.85      |
|              | 12/13          | 18.00                        | 17.81                  | 17.72      | 17.77        |               | 25/25          | 18.00                        | 17.80                  | 17.78      | 17.81      |
|              | 25/0           | 18.00                        | 17.87                  | 17.70      | 17.75        |               | 50/0           | 18.00                        | 17.68                  | 17.66      | 17.75      |

| LTE B7/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B7/BW=20M |                | Average Conducted Power(dBm) |                        |            |            |
|---------------|----------------|------------------------------|------------------------|------------|--------------|---------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|               |                |                              | 20825/2507.5           | 21100/2535 | 21375/2562.5 |               |                |                              | 20850/2510             | 21100/2535 | 21350/2560 |
| QPSK          | 1/0            | 18.00                        | 17.72                  | 17.69      | 17.48        | QPSK          | 1/0            | 18.00                        | 17.70                  | 17.57      | 17.49      |
|               | 1/37           | 18.00                        | 17.88                  | 17.76      | 17.66        |               | 1/50           | 18.00                        | <b>17.92</b>           | 17.70      | 17.69      |
|               | 1/74           | 18.00                        | 17.75                  | 17.64      | 17.66        |               | 1/99           | 18.00                        | 17.72                  | 17.50      | 17.66      |
|               | 36/0           | 18.00                        | 17.85                  | 17.75      | 17.68        |               | 50/0           | 18.00                        | 17.80                  | 17.75      | 17.71      |
|               | 36/19          | 18.00                        | 17.65                  | 17.78      | 17.75        |               | 50/25          | 18.00                        | 17.76                  | 17.79      | 17.74      |
|               | 36/39          | 18.00                        | 17.79                  | 17.73      | 17.79        |               | 50/50          | 18.00                        | <b>17.90</b>           | 17.74      | 17.75      |
|               | 75/0           | 18.00                        | 17.78                  | 17.74      | 17.72        |               | 100/0          | 18.00                        | 17.78                  | 17.72      | 17.72      |
| 16QAM         | 1/0            | 18.00                        | 17.67                  | 17.77      | 17.64        | 16QAM         | 1/0            | 18.00                        | 17.80                  | 17.71      | 17.82      |
|               | 1/37           | 18.00                        | 17.83                  | 17.69      | 17.81        |               | 1/50           | 18.00                        | 17.86                  | 17.69      | 17.90      |
|               | 1/74           | 18.00                        | 17.71                  | 17.88      | 17.76        |               | 1/99           | 18.00                        | 17.82                  | 17.68      | 17.71      |
|               | 36/0           | 18.00                        | 17.83                  | 17.71      | 17.63        |               | 50/0           | 18.00                        | 17.81                  | 17.68      | 17.66      |
|               | 36/19          | 18.00                        | 17.79                  | 17.72      | 17.68        |               | 50/25          | 18.00                        | 17.77                  | 17.69      | 17.70      |
|               | 36/39          | 18.00                        | 17.80                  | 17.69      | 17.72        |               | 50/50          | 18.00                        | 17.80                  | 17.66      | 17.74      |
|               | 75/0           | 18.00                        | 17.88                  | 17.70      | 17.70        |               | 100/0          | 18.00                        | 17.72                  | 17.70      | 17.68      |
| 64QAM         | 1/0            | 18.00                        | 17.77                  | 17.69      | 17.85        | 64QAM         | 1/0            | 18.00                        | 17.59                  | 17.71      | 17.71      |
|               | 1/37           | 18.00                        | 17.64                  | 17.77      | 17.73        |               | 1/50           | 18.00                        | 17.65                  | 17.75      | 17.75      |
|               | 1/74           | 18.00                        | 17.82                  | 17.64      | 17.67        |               | 1/99           | 18.00                        | 17.61                  | 17.70      | 17.86      |
|               | 36/0           | 18.00                        | 17.73                  | 17.70      | 17.63        |               | 50/0           | 18.00                        | 17.76                  | 17.74      | 17.68      |
|               | 36/19          | 18.00                        | 17.86                  | 17.69      | 17.73        |               | 50/25          | 18.00                        | 17.87                  | 17.76      | 17.72      |
|               | 36/39          | 18.00                        | 17.88                  | 17.67      | 17.73        |               | 50/50          | 18.00                        | 17.89                  | 17.72      | 17.75      |
|               | 75/0           | 18.00                        | 17.78                  | 17.66      | 17.75        |               | 100/0          | 18.00                        | 17.80                  | 17.73      | 17.73      |

Note: The tested channels are marks in bold.

## 5. Conducted power measurement results of LTE B12

Down Antenna\_Receiver on

| LTE B12/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |             | LTE B12/BW=3M |                | Average Conducted Power(dBm) |                        |             |             |
|-----------------|----------------|------------------------------|------------------------|-------------|-------------|---------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|                 |                |                              | 23017/699.7            | 23095/707.5 | 23173/715.3 |               |                |                              | 23025/700.5            | 23095/707.5 | 23165/714.5 |
| QPSK            | 1/0            | 24.00                        | 22.75                  | 22.70       | 22.80       | QPSK          | 1/0            | 24.00                        | 22.74                  | 22.84       | 22.78       |
|                 | 1/2            | 24.00                        | 22.88                  | 22.82       | 22.93       |               | 1/7            | 24.00                        | 22.90                  | 22.93       | 22.88       |
|                 | 1/5            | 24.00                        | 22.80                  | 22.73       | 22.80       |               | 1/14           | 24.00                        | 22.82                  | 22.83       | 22.81       |
|                 | 3/0            | 24.00                        | 22.77                  | 22.83       | 22.84       |               | 8/0            | 23.00                        | 21.80                  | 21.80       | 21.83       |
|                 | 3/1            | 24.00                        | 22.82                  | 22.86       | 22.88       |               | 8/3            | 23.00                        | 21.83                  | 21.85       | 21.82       |
|                 | 3/3            | 24.00                        | 22.80                  | 22.84       | 22.89       |               | 8/7            | 23.00                        | 21.81                  | 21.82       | 21.81       |
|                 | 6/0            | 23.00                        | 21.84                  | 21.87       | 21.87       |               | 15/0           | 23.00                        | 21.78                  | 21.80       | 21.77       |
| 16QAM           | 1/0            | 23.00                        | 21.72                  | 21.91       | 22.06       | 16QAM         | 1/0            | 23.00                        | 21.64                  | 22.15       | 21.76       |
|                 | 1/2            | 23.00                        | 21.77                  | 21.97       | 22.19       |               | 1/7            | 23.00                        | 21.77                  | 22.30       | 21.90       |
|                 | 1/5            | 23.00                        | 21.72                  | 21.89       | 22.15       |               | 1/14           | 23.00                        | 21.64                  | 22.15       | 21.81       |
|                 | 3/0            | 23.00                        | 21.86                  | 21.87       | 21.96       |               | 8/0            | 22.00                        | 20.85                  | 20.89       | 20.86       |
|                 | 3/1            | 23.00                        | 21.91                  | 21.90       | 22.02       |               | 8/3            | 22.00                        | 20.90                  | 20.92       | 20.88       |
|                 | 3/3            | 23.00                        | 21.91                  | 21.91       | 22.03       |               | 8/7            | 22.00                        | 20.86                  | 20.89       | 20.86       |
|                 | 6/0            | 22.00                        | 20.91                  | 20.98       | 20.78       |               | 15/0           | 22.00                        | 20.79                  | 20.83       | 20.75       |
| 64QAM           | 1/0            | 22.00                        | 20.85                  | 20.91       | 21.17       | 64QAM         | 1/0            | 22.00                        | 21.03                  | 20.92       | 20.97       |
|                 | 1/2            | 22.00                        | 20.98                  | 21.02       | 21.31       |               | 1/7            | 22.00                        | 21.18                  | 21.07       | 21.10       |
|                 | 1/5            | 22.00                        | 20.85                  | 20.89       | 21.22       |               | 1/14           | 22.00                        | 21.05                  | 20.97       | 20.99       |
|                 | 3/0            | 22.00                        | 20.88                  | 20.78       | 21.17       |               | 8/0            | 21.00                        | 19.81                  | 19.81       | 19.79       |
|                 | 3/1            | 22.00                        | 20.93                  | 20.82       | 21.19       |               | 8/3            | 21.00                        | 19.88                  | 19.90       | 19.80       |
|                 | 3/3            | 22.00                        | 20.94                  | 20.70       | 21.18       |               | 8/7            | 21.00                        | 19.80                  | 19.86       | 19.76       |
|                 | 6/0            | 21.00                        | 20.07                  | 19.90       | 19.87       |               | 15/0           | 21.00                        | 19.74                  | 19.83       | 19.82       |

| LTE B12/BW=5M |                | Average Conducted Power(dBm) |                        |             |             | LTE B12/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|---------------|----------------|------------------------------|------------------------|-------------|-------------|----------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|               |                |                              | 23035/701.5            | 23095/707.5 | 23155/713.5 |                |                |                              | 23060/704              | 23095/707.5  | 23130/711 |
| QPSK          | 1/0            | 24.00                        | 22.78                  | 22.69       | 22.70       | QPSK           | 1/0            | 24.00                        | 22.74                  | 22.81        | 22.73     |
|               | 1/12           | 24.00                        | 22.87                  | 22.81       | 22.87       |                | 1/24           | 24.00                        | 22.93                  | <b>22.99</b> | 22.90     |
|               | 1/24           | 24.00                        | 22.85                  | 22.77       | 22.82       |                | 1/49           | 24.00                        | 22.80                  | 22.85        | 22.84     |
|               | 12/0           | 23.00                        | 21.80                  | 21.71       | 21.87       |                | 25/0           | 23.00                        | 21.85                  | 21.71        | 21.75     |
|               | 12/6           | 23.00                        | 21.81                  | 21.85       | 21.79       |                | 25/12          | 23.00                        | 21.85                  | 21.85        | 21.77     |
|               | 12/13          | 23.00                        | 21.80                  | 21.86       | 21.73       |                | 25/25          | 23.00                        | <b>22.06</b>           | 21.79        | 21.62     |
|               | 25/0           | 23.00                        | 21.80                  | 21.79       | 21.77       |                | 50/0           | 23.00                        | 21.95                  | 21.76        | 21.69     |
| 16QAM         | 1/0            | 23.00                        | 21.80                  | 22.22       | 21.76       | 16QAM          | 1/0            | 23.00                        | 21.62                  | 22.04        | 21.77     |
|               | 1/12           | 23.00                        | 21.93                  | 22.30       | 21.87       |                | 1/24           | 23.00                        | 21.90                  | 22.31        | 21.83     |
|               | 1/24           | 23.00                        | 21.96                  | 22.19       | 21.86       |                | 1/49           | 23.00                        | 21.74                  | 22.08        | 21.77     |
|               | 12/0           | 22.00                        | 20.83                  | 20.82       | 20.91       |                | 25/0           | 22.00                        | 20.88                  | 20.74        | 20.81     |
|               | 12/6           | 22.00                        | 20.86                  | 20.98       | 20.87       |                | 25/12          | 22.00                        | 20.91                  | 20.88        | 20.83     |
|               | 12/13          | 22.00                        | 20.84                  | 20.97       | 20.79       |                | 25/25          | 22.00                        | 21.07                  | 20.86        | 20.66     |
|               | 25/0           | 22.00                        | 20.76                  | 20.85       | 20.73       |                | 50/0           | 22.00                        | 20.91                  | 20.82        | 20.72     |
| 64QAM         | 1/0            | 22.00                        | 20.62                  | 21.09       | 20.88       | 64QAM          | 1/0            | 22.00                        | 21.03                  | 20.90        | 20.95     |
|               | 1/12           | 22.00                        | 20.73                  | 21.19       | 21.04       |                | 1/24           | 22.00                        | 21.26                  | 21.08        | 21.08     |
|               | 1/24           | 22.00                        | 20.72                  | 21.09       | 20.99       |                | 1/49           | 22.00                        | 21.13                  | 21.00        | 21.02     |
|               | 12/0           | 21.00                        | 19.81                  | 19.67       | 19.93       |                | 25/0           | 21.00                        | 19.90                  | 19.78        | 19.86     |
|               | 12/6           | 21.00                        | 19.83                  | 19.77       | 19.88       |                | 25/12          | 21.00                        | 19.90                  | 19.92        | 19.92     |
|               | 12/13          | 21.00                        | 19.82                  | 19.81       | 19.79       |                | 25/25          | 21.00                        | 20.11                  | 19.97        | 19.74     |
|               | 25/0           | 21.00                        | 19.77                  | 19.77       | 19.80       |                | 50/0           | 21.00                        | 19.99                  | 19.86        | 19.73     |

Down Antenna Receiver off

| LTE B12/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |             | LTE B12/BW=3M |                | Average Conducted Power(dBm) |                        |             |             |
|-----------------|----------------|------------------------------|------------------------|-------------|-------------|---------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|                 |                |                              | 23017/699.7            | 23095/707.5 | 23173/715.3 |               |                |                              | 23025/700.5            | 23095/707.5 | 23165/714.5 |
| QPSK            | 1/0            | 24.00                        | 22.67                  | 22.66       | 22.56       | QPSK          | 1/0            | 24.00                        | 22.62                  | 22.69       | 22.67       |
|                 | 1/2            | 24.00                        | 22.76                  | 22.77       | 22.74       |               | 1/7            | 24.00                        | 22.78                  | 22.80       | 22.76       |
|                 | 1/5            | 24.00                        | 22.70                  | 22.69       | 22.59       |               | 1/14           | 24.00                        | 22.69                  | 22.68       | 22.65       |
|                 | 3/0            | 24.00                        | 22.61                  | 22.72       | 22.69       |               | 8/0            | 23.00                        | 21.71                  | 21.68       | 21.67       |
|                 | 3/1            | 24.00                        | 22.68                  | 22.75       | 22.78       |               | 8/3            | 23.00                        | 21.76                  | 21.75       | 21.69       |
|                 | 3/3            | 24.00                        | 22.66                  | 22.69       | 22.73       |               | 8/7            | 23.00                        | 21.67                  | 21.70       | 21.66       |
|                 | 6/0            | 23.00                        | 21.76                  | 21.75       | 21.69       |               | 15/0           | 23.00                        | 21.66                  | 21.65       | 21.63       |
| 16QAM           | 1/0            | 23.00                        | 21.56                  | 21.77       | 21.94       | 16QAM         | 1/0            | 23.00                        | 21.54                  | 22.03       | 21.63       |
|                 | 1/2            | 23.00                        | 21.64                  | 21.84       | 22.07       |               | 1/7            | 23.00                        | 21.63                  | 22.16       | 21.76       |
|                 | 1/5            | 23.00                        | 21.60                  | 21.75       | 22.01       |               | 1/14           | 23.00                        | 21.54                  | 21.99       | 21.66       |
|                 | 3/0            | 23.00                        | 21.74                  | 21.74       | 21.89       |               | 8/0            | 22.00                        | 20.71                  | 20.76       | 20.73       |
|                 | 3/1            | 23.00                        | 21.79                  | 21.78       | 21.88       |               | 8/3            | 22.00                        | 20.77                  | 20.81       | 20.75       |
|                 | 3/3            | 23.00                        | 21.78                  | 21.72       | 21.88       |               | 8/7            | 22.00                        | 20.74                  | 20.75       | 20.71       |
|                 | 6/0            | 22.00                        | 20.82                  | 20.83       | 20.64       |               | 15/0           | 22.00                        | 20.64                  | 20.68       | 20.63       |
| 64QAM           | 1/0            | 22.00                        | 20.75                  | 21.05       | 20.74       | 64QAM         | 1/0            | 22.00                        | 20.87                  | 20.82       | 20.83       |
|                 | 1/2            | 22.00                        | 20.81                  | 21.25       | 20.93       |               | 1/7            | 22.00                        | 21.05                  | 20.91       | 20.95       |
|                 | 1/5            | 22.00                        | 20.77                  | 21.00       | 20.80       |               | 1/14           | 22.00                        | 20.92                  | 20.82       | 20.78       |
|                 | 3/0            | 22.00                        | 20.57                  | 21.08       | 20.84       |               | 8/0            | 21.00                        | 19.73                  | 19.69       | 19.64       |
|                 | 3/1            | 22.00                        | 20.61                  | 21.11       | 20.90       |               | 8/3            | 21.00                        | 19.77                  | 19.76       | 19.64       |
|                 | 3/3            | 22.00                        | 20.62                  | 21.01       | 20.86       |               | 8/7            | 21.00                        | 19.71                  | 19.73       | 19.62       |
|                 | 6/0            | 21.00                        | 19.82                  | 19.69       | 20.02       |               | 15/0           | 21.00                        | 19.62                  | 19.71       | 19.66       |

| LTE B12/BW=5M |                | Average Conducted Power(dBm) |                        |             |             | LTE B12/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|---------------|----------------|------------------------------|------------------------|-------------|-------------|----------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|               |                |                              | 23035/701.5            | 23095/707.5 | 23155/713.5 |                |                |                              | 23060/704              | 23095/707.5  | 23130/711 |
| QPSK          | 1/0            | 24.00                        | 22.65                  | 22.61       | 22.56       | QPSK           | 1/0            | 24.00                        | 22.63                  | 22.68        | 22.62     |
|               | 1/12           | 24.00                        | 22.74                  | 22.64       | 22.71       |                | 1/24           | 24.00                        | 22.80                  | <b>22.83</b> | 22.75     |
|               | 1/24           | 24.00                        | 22.70                  | 22.62       | 22.64       |                | 1/49           | 24.00                        | 22.64                  | 22.70        | 22.65     |
|               | 12/0           | 23.00                        | 21.69                  | 21.57       | 21.71       |                | 25/0           | 23.00                        | 21.73                  | 21.62        | 21.66     |
|               | 12/6           | 23.00                        | 21.69                  | 21.71       | 21.68       |                | 25/12          | 23.00                        | 21.74                  | 21.69        | 21.61     |
|               | 12/13          | 23.00                        | 21.65                  | 21.72       | 21.59       |                | 25/25          | 23.00                        | <b>21.92</b>           | 21.64        | 21.47     |
|               | 25/0           | 23.00                        | 21.65                  | 21.65       | 21.63       |                | 50/0           | 23.00                        | 21.84                  | 21.62        | 21.55     |
| 16QAM         | 1/0            | 23.00                        | 21.69                  | 22.09       | 21.64       | 16QAM          | 1/0            | 23.00                        | 21.53                  | 21.96        | 21.71     |
|               | 1/12           | 23.00                        | 21.80                  | 22.19       | 21.68       |                | 1/24           | 23.00                        | 21.74                  | 22.15        | 21.79     |
|               | 1/24           | 23.00                        | 21.79                  | 22.05       | 21.70       |                | 1/49           | 23.00                        | 21.59                  | 21.92        | 21.69     |
|               | 12/0           | 22.00                        | 20.71                  | 20.69       | 20.77       |                | 25/0           | 22.00                        | 20.73                  | 20.59        | 20.78     |
|               | 12/6           | 22.00                        | 20.71                  | 20.81       | 20.73       |                | 25/12          | 22.00                        | 20.74                  | 20.74        | 20.77     |
|               | 12/13          | 22.00                        | 20.68                  | 20.82       | 20.63       |                | 25/25          | 22.00                        | 20.95                  | 20.71        | 20.59     |
|               | 25/0           | 22.00                        | 20.65                  | 20.71       | 20.60       |                | 50/0           | 22.00                        | 20.81                  | 20.64        | 20.65     |
| 64QAM         | 1/0            | 22.00                        | 20.47                  | 20.93       | 20.76       | 64QAM          | 1/0            | 22.00                        | 20.88                  | 20.80        | 20.98     |
|               | 1/12           | 22.00                        | 20.60                  | 21.06       | 20.88       |                | 1/24           | 22.00                        | 21.12                  | 20.93        | 20.99     |
|               | 1/24           | 22.00                        | 20.56                  | 20.91       | 20.85       |                | 1/49           | 22.00                        | 20.99                  | 20.77        | 20.95     |
|               | 12/0           | 21.00                        | 19.67                  | 19.52       | 19.77       |                | 25/0           | 21.00                        | 19.79                  | 19.65        | 19.70     |
|               | 12/6           | 21.00                        | 19.72                  | 19.64       | 19.73       |                | 25/12          | 21.00                        | 19.77                  | 19.76        | 19.71     |
|               | 12/13          | 21.00                        | 19.67                  | 19.63       | 19.65       |                | 25/25          | 21.00                        | 19.97                  | 19.81        | 19.53     |
|               | 25/0           | 21.00                        | 19.61                  | 19.62       | 19.67       |                | 50/0           | 21.00                        | 19.85                  | 19.69        | 19.58     |

Up Antenna Receiver on

| LTE B12/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |             | LTE B12/BW=3M |                | Average Conducted Power(dBm) |                        |             |             |
|-----------------|----------------|------------------------------|------------------------|-------------|-------------|---------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|                 |                |                              | 23017/699.7            | 23095/707.5 | 23173/715.3 |               |                |                              | 23025/700.5            | 23095/707.5 | 23165/714.5 |
| QPSK            | 1/0            | 24.00                        | 23.19                  | 23.17       | 23.11       | QPSK          | 1/0            | 24.00                        | 23.14                  | 23.25       | 23.20       |
|                 | 1/2            | 24.00                        | 23.31                  | 23.32       | 23.26       |               | 1/7            | 24.00                        | 23.31                  | 23.32       | 23.29       |
|                 | 1/5            | 24.00                        | 23.19                  | 23.20       | 23.12       |               | 1/14           | 24.00                        | 23.21                  | 23.25       | 23.18       |
|                 | 3/0            | 24.00                        | 23.18                  | 23.23       | 23.24       |               | 8/0            | 23.00                        | 22.19                  | 22.24       | 22.22       |
|                 | 3/1            | 24.00                        | 23.22                  | 23.32       | 23.28       |               | 8/3            | 23.00                        | 22.25                  | 22.28       | 22.22       |
|                 | 3/3            | 24.00                        | 23.24                  | 23.24       | 23.26       |               | 8/7            | 23.00                        | 22.22                  | 22.22       | 22.19       |
|                 | 6/0            | 23.00                        | 22.27                  | 22.33       | 22.25       |               | 15/0           | 23.00                        | 22.20                  | 22.20       | 22.15       |
| 16QAM           | 1/0            | 23.00                        | 22.16                  | 22.29       | 22.48       | 16QAM         | 1/0            | 23.00                        | 22.10                  | 22.54       | 22.18       |
|                 | 1/2            | 23.00                        | 22.22                  | 22.38       | 22.60       |               | 1/7            | 23.00                        | 22.23                  | 22.70       | 22.31       |
|                 | 1/5            | 23.00                        | 22.18                  | 22.30       | 22.55       |               | 1/14           | 23.00                        | 22.11                  | 22.55       | 22.18       |
|                 | 3/0            | 23.00                        | 22.33                  | 22.26       | 22.38       |               | 8/0            | 22.00                        | 21.28                  | 21.32       | 21.26       |
|                 | 3/1            | 23.00                        | 22.39                  | 22.32       | 22.42       |               | 8/3            | 22.00                        | 21.33                  | 21.33       | 21.28       |
|                 | 3/3            | 23.00                        | 22.36                  | 22.27       | 22.40       |               | 8/7            | 22.00                        | 21.29                  | 21.29       | 21.23       |
|                 | 6/0            | 22.00                        | 21.38                  | 21.39       | 21.15       |               | 15/0           | 22.00                        | 21.21                  | 21.23       | 21.17       |
| 64QAM           | 1/0            | 22.00                        | 21.53                  | 21.32       | 21.29       | 64QAM         | 1/0            | 22.00                        | 21.50                  | 21.33       | 21.34       |
|                 | 1/2            | 22.00                        | 21.68                  | 21.42       | 21.43       |               | 1/7            | 22.00                        | 21.62                  | 21.43       | 21.49       |
|                 | 1/5            | 22.00                        | 21.57                  | 21.33       | 21.35       |               | 1/14           | 22.00                        | 21.50                  | 21.37       | 21.31       |
|                 | 3/0            | 22.00                        | 21.48                  | 21.37       | 21.19       |               | 8/0            | 21.00                        | 20.24                  | 20.23       | 20.16       |
|                 | 3/1            | 22.00                        | 21.54                  | 21.41       | 21.23       |               | 8/3            | 21.00                        | 20.30                  | 20.27       | 20.17       |
|                 | 3/3            | 22.00                        | 21.53                  | 21.37       | 21.18       |               | 8/7            | 21.00                        | 20.25                  | 20.26       | 20.15       |
|                 | 6/0            | 21.00                        | 20.19                  | 20.53       | 20.31       |               | 15/0           | 21.00                        | 20.17                  | 20.22       | 20.20       |

| LTE B12/BW=5M |                | Average Conducted Power(dBm) |                        |             |             | LTE B12/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|---------------|----------------|------------------------------|------------------------|-------------|-------------|----------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|               |                |                              | 23035/701.5            | 23095/707.5 | 23155/713.5 |                |                |                              | 23060/704              | 23095/707.5  | 23130/711 |
| QPSK          | 1/0            | 24.00                        | 23.17                  | 23.14       | 23.11       | QPSK           | 1/0            | 24.00                        | 23.13                  | 23.21        | 23.16     |
|               | 1/12           | 24.00                        | 23.31                  | 23.20       | 23.26       |                | 1/24           | 24.00                        | 23.35                  | <b>23.36</b> | 23.27     |
|               | 1/24           | 24.00                        | 23.26                  | 23.16       | 23.21       |                | 1/49           | 24.00                        | 23.21                  | 23.25        | 23.23     |
|               | 12/0           | 23.00                        | 22.19                  | 22.18       | 22.24       |                | 25/0           | 23.00                        | 22.25                  | 22.20        | 22.22     |
|               | 12/6           | 23.00                        | 22.24                  | 22.24       | 22.22       |                | 25/12          | 23.00                        | 22.25                  | 22.26        | 22.18     |
|               | 12/13          | 23.00                        | 22.22                  | 22.26       | 22.14       |                | 25/25          | 23.00                        | <b>22.37</b>           | 22.23        | 22.08     |
|               | 25/0           | 23.00                        | 22.19                  | 22.17       | 22.13       |                | 50/0           | 23.00                        | 22.28                  | 22.23        | 22.16     |
| 16QAM         | 1/0            | 23.00                        | 22.27                  | 22.63       | 22.13       | 16QAM          | 1/0            | 23.00                        | 22.10                  | 22.09        | 22.53     |
|               | 1/12           | 23.00                        | 22.38                  | 22.75       | 22.29       |                | 1/24           | 23.00                        | 22.37                  | 22.30        | 22.64     |
|               | 1/24           | 23.00                        | 22.36                  | 22.63       | 22.25       |                | 1/49           | 23.00                        | 22.18                  | 22.11        | 22.56     |
|               | 12/0           | 22.00                        | 21.21                  | 21.29       | 21.28       |                | 25/0           | 22.00                        | 21.22                  | 21.22        | 21.28     |
|               | 12/6           | 22.00                        | 21.29                  | 21.38       | 21.27       |                | 25/12          | 22.00                        | 21.27                  | 21.29        | 21.28     |
|               | 12/13          | 22.00                        | 21.26                  | 21.37       | 21.20       |                | 25/25          | 22.00                        | 21.38                  | 21.30        | 21.18     |
|               | 25/0           | 22.00                        | 21.20                  | 21.27       | 21.14       |                | 50/0           | 22.00                        | 21.27                  | 21.23        | 21.22     |
| 64QAM         | 1/0            | 22.00                        | 21.05                  | 21.45       | 21.28       | 64QAM          | 1/0            | 22.00                        | 21.36                  | 21.47        | 21.34     |
|               | 1/12           | 22.00                        | 21.15                  | 21.54       | 21.41       |                | 1/24           | 22.00                        | 21.55                  | 21.68        | 21.42     |
|               | 1/24           | 22.00                        | 21.15                  | 21.48       | 21.38       |                | 1/49           | 22.00                        | 21.38                  | 21.49        | 21.41     |
|               | 12/0           | 21.00                        | 20.18                  | 20.06       | 20.27       |                | 25/0           | 21.00                        | 20.30                  | 20.25        | 20.30     |
|               | 12/6           | 21.00                        | 20.26                  | 20.16       | 20.26       |                | 25/12          | 21.00                        | 20.34                  | 20.31        | 20.31     |
|               | 12/13          | 21.00                        | 20.25                  | 20.17       | 20.19       |                | 25/25          | 21.00                        | 20.45                  | 20.33        | 20.23     |
|               | 25/0           | 21.00                        | 20.16                  | 20.16       | 20.17       |                | 50/0           | 21.00                        | 20.33                  | 20.28        | 20.23     |

Up Antenna Receiver off

| LTE B12/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |             | LTE B12/BW=3M |                | Average Conducted Power(dBm) |                        |             |             |
|-----------------|----------------|------------------------------|------------------------|-------------|-------------|---------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|                 |                |                              | 23017/699.7            | 23095/707.5 | 23173/715.3 |               |                |                              | 23025/700.5            | 23095/707.5 | 23165/714.5 |
| QPSK            | 1/0            | 24.00                        | 23.09                  | 23.21       | 23.15       | QPSK          | 1/0            | 24.00                        | 23.15                  | 23.23       | 23.17       |
|                 | 1/2            | 24.00                        | 23.22                  | 23.28       | 23.31       |               | 1/7            | 24.00                        | 23.30                  | 23.35       | 23.27       |
|                 | 1/5            | 24.00                        | 23.13                  | 23.17       | 23.15       |               | 1/14           | 24.00                        | 23.21                  | 23.21       | 23.18       |
|                 | 3/0            | 24.00                        | 23.18                  | 23.16       | 23.23       |               | 8/0            | 23.00                        | 22.22                  | 22.24       | 22.19       |
|                 | 3/1            | 24.00                        | 23.22                  | 23.25       | 23.30       |               | 8/3            | 23.00                        | 22.27                  | 22.29       | 22.21       |
|                 | 3/3            | 24.00                        | 23.26                  | 23.19       | 23.23       |               | 8/7            | 23.00                        | 22.23                  | 22.21       | 22.16       |
|                 | 6/0            | 23.00                        | 22.27                  | 22.32       | 22.26       |               | 15/0           | 23.00                        | 22.20                  | 22.16       | 22.14       |
| 16QAM           | 1/0            | 23.00                        | 22.50                  | 22.20       | 22.22       | 16QAM         | 1/0            | 23.00                        | 22.10                  | 22.57       | 22.16       |
|                 | 1/2            | 23.00                        | 22.58                  | 22.26       | 22.31       |               | 1/7            | 23.00                        | 22.21                  | 22.69       | 22.26       |
|                 | 1/5            | 23.00                        | 22.50                  | 22.20       | 22.24       |               | 1/14           | 23.00                        | 22.08                  | 22.53       | 22.15       |
|                 | 3/0            | 23.00                        | 22.36                  | 22.37       | 22.20       |               | 8/0            | 22.00                        | 21.28                  | 21.34       | 21.23       |
|                 | 3/1            | 23.00                        | 22.38                  | 22.43       | 22.24       |               | 8/3            | 22.00                        | 21.33                  | 21.33       | 21.26       |
|                 | 3/3            | 23.00                        | 22.36                  | 22.40       | 22.20       |               | 8/7            | 22.00                        | 21.29                  | 21.26       | 21.22       |
|                 | 6/0            | 22.00                        | 21.14                  | 21.47       | 21.38       |               | 15/0           | 22.00                        | 21.21                  | 21.23       | 21.11       |
| 64QAM           | 1/0            | 22.00                        | 21.30                  | 21.33       | 21.49       | 64QAM         | 1/0            | 22.00                        | 21.46                  | 21.34       | 21.36       |
|                 | 1/2            | 22.00                        | 21.48                  | 21.43       | 21.71       |               | 1/7            | 22.00                        | 21.62                  | 21.46       | 21.50       |
|                 | 1/5            | 22.00                        | 21.29                  | 21.35       | 21.60       |               | 1/14           | 22.00                        | 21.47                  | 21.37       | 21.31       |
|                 | 3/0            | 22.00                        | 21.32                  | 21.18       | 21.53       |               | 8/0            | 21.00                        | 20.22                  | 20.24       | 20.16       |
|                 | 3/1            | 22.00                        | 21.37                  | 21.25       | 21.55       |               | 8/3            | 21.00                        | 20.31                  | 20.29       | 20.16       |
|                 | 3/3            | 22.00                        | 21.37                  | 21.20       | 21.54       |               | 8/7            | 21.00                        | 20.25                  | 20.23       | 20.14       |
|                 | 6/0            | 21.00                        | 20.55                  | 20.32       | 20.23       |               | 15/0           | 21.00                        | 20.16                  | 20.24       | 20.19       |

| LTE B12/BW=5M |                | Average Conducted Power(dBm) |                        |             |             | LTE B12/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|---------------|----------------|------------------------------|------------------------|-------------|-------------|----------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|               |                |                              | 23035/701.5            | 23095/707.5 | 23155/713.5 |                |                |                              | 23060/704              | 23095/707.5  | 23130/711 |
| QPSK          | 1/0            | 24.00                        | 23.19                  | 23.16       | 23.11       | QPSK           | 1/0            | 24.00                        | 23.14                  | 23.22        | 23.17     |
|               | 1/12           | 24.00                        | 23.29                  | 23.22       | 23.22       |                | 1/24           | 24.00                        | 23.34                  | <b>23.36</b> | 23.27     |
|               | 1/24           | 24.00                        | 23.25                  | 23.13       | 23.17       |                | 1/49           | 24.00                        | 23.18                  | 23.21        | 23.18     |
|               | 12/0           | 23.00                        | 22.20                  | 22.16       | 22.21       |                | 25/0           | 23.00                        | 22.26                  | 22.19        | 22.22     |
|               | 12/6           | 23.00                        | 22.23                  | 22.21       | 22.19       |                | 25/12          | 23.00                        | 22.26                  | 22.23        | 22.19     |
|               | 12/13          | 23.00                        | 22.21                  | 22.24       | 22.11       |                | 25/25          | 23.00                        | <b>22.35</b>           | 22.21        | 22.04     |
|               | 25/0           | 23.00                        | 22.22                  | 22.15       | 22.13       |                | 50/0           | 23.00                        | 22.30                  | 22.20        | 22.10     |
| 16QAM         | 1/0            | 23.00                        | 22.26                  | 22.63       | 22.13       | 16QAM          | 1/0            | 23.00                        | 22.06                  | 22.51        | 22.17     |
|               | 1/12           | 23.00                        | 22.36                  | 22.71       | 22.21       |                | 1/24           | 23.00                        | 22.27                  | 22.65        | 22.21     |
|               | 1/24           | 23.00                        | 22.35                  | 22.59       | 22.19       |                | 1/49           | 23.00                        | 22.09                  | 22.47        | 22.13     |
|               | 12/0           | 22.00                        | 21.20                  | 21.30       | 21.25       |                | 25/0           | 22.00                        | 21.24                  | 21.22        | 21.24     |
|               | 12/6           | 22.00                        | 21.26                  | 21.34       | 21.24       |                | 25/12          | 22.00                        | 21.26                  | 21.26        | 21.24     |
|               | 12/13          | 22.00                        | 21.24                  | 21.34       | 21.16       |                | 25/25          | 22.00                        | 21.35                  | 21.30        | 21.14     |
|               | 25/0           | 22.00                        | 21.18                  | 21.25       | 21.09       |                | 50/0           | 22.00                        | 21.24                  | 21.23        | 21.16     |
| 64QAM         | 1/0            | 22.00                        | 21.05                  | 21.46       | 21.30       | 64QAM          | 1/0            | 22.00                        | 21.33                  | 21.51        | 21.33     |
|               | 1/12           | 22.00                        | 21.14                  | 21.56       | 21.46       |                | 1/24           | 22.00                        | 21.55                  | 21.66        | 21.40     |
|               | 1/24           | 22.00                        | 21.12                  | 21.45       | 21.36       |                | 1/49           | 22.00                        | 21.35                  | 21.49        | 21.37     |
|               | 12/0           | 21.00                        | 20.17                  | 20.10       | 20.29       |                | 25/0           | 21.00                        | 20.28                  | 20.24        | 20.30     |
|               | 12/6           | 21.00                        | 20.24                  | 20.17       | 20.23       |                | 25/12          | 21.00                        | 20.32                  | 20.29        | 20.30     |
|               | 12/13          | 21.00                        | 20.21                  | 20.18       | 20.17       |                | 25/25          | 21.00                        | 20.44                  | 20.31        | 20.18     |
|               | 25/0           | 21.00                        | 20.13                  | 20.17       | 20.16       |                | 50/0           | 21.00                        | 20.31                  | 20.26        | 20.21     |

Note: The tested channels are marks in bold.

## 6. Conducted power measurement results of LTE B17

Down Antenna\_Receiver on

| LTE B17/BW=5M |                | Average Conducted Power(dBm) |                        |           |             | LTE B17/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|---------------|----------------|------------------------------|------------------------|-----------|-------------|----------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|               |                |                              | 23755/706.5            | 23790/710 | 23825/713.5 |                |                |                              | 23780/709              | 23790/710    | 23800/711 |
| QPSK          | 1/0            | 24.00                        | 22.71                  | 22.75     | 22.67       | QPSK           | 1/0            | 24.00                        | 22.67                  | 22.75        | 22.68     |
|               | 1/12           | 24.00                        | 22.79                  | 22.84     | 22.78       |                | 1/24           | 24.00                        | 22.89                  | <b>22.96</b> | 22.86     |
|               | 1/24           | 24.00                        | 22.75                  | 22.75     | 22.66       |                | 1/49           | 24.00                        | 22.74                  | 22.82        | 22.70     |
|               | 12/0           | 23.00                        | 21.69                  | 21.73     | 21.86       |                | 25/0           | 23.00                        | 21.69                  | 21.68        | 21.80     |
|               | 12/6           | 23.00                        | 21.83                  | 21.79     | 21.78       |                | 25/12          | 23.00                        | <b>21.81</b>           | 21.80        | 21.79     |
|               | 12/13          | 23.00                        | 21.87                  | 21.76     | 21.72       |                | 25/25          | 23.00                        | 21.68                  | 21.64        | 21.61     |
|               | 25/0           | 23.00                        | 21.79                  | 21.74     | 21.76       |                | 50/0           | 23.00                        | 21.65                  | 21.67        | 21.71     |
| 16QAM         | 1/0            | 23.00                        | 21.79                  | 21.86     | 22.12       | 16QAM          | 1/0            | 23.00                        | 21.69                  | 22.10        | 21.74     |
|               | 1/12           | 23.00                        | 21.94                  | 21.92     | 22.23       |                | 1/24           | 23.00                        | 21.80                  | 22.27        | 21.86     |
|               | 1/24           | 23.00                        | 21.84                  | 21.82     | 22.20       |                | 1/49           | 23.00                        | 21.68                  | 22.09        | 21.75     |
|               | 12/0           | 22.00                        | 20.67                  | 20.77     | 20.91       |                | 25/0           | 22.00                        | 20.69                  | 20.71        | 20.80     |
|               | 12/6           | 22.00                        | 20.84                  | 20.85     | 20.90       |                | 25/12          | 22.00                        | 20.85                  | 20.82        | 20.81     |
|               | 12/13          | 22.00                        | 20.90                  | 20.79     | 20.83       |                | 25/25          | 22.00                        | 20.72                  | 20.66        | 20.67     |
|               | 25/0           | 22.00                        | 20.77                  | 20.72     | 20.83       |                | 50/0           | 22.00                        | 20.69                  | 20.70        | 20.73     |
| 64QAM         | 1/0            | 22.00                        | 21.07                  | 21.01     | 20.62       | 64QAM          | 1/0            | 22.00                        | 21.06                  | 20.92        | 20.92     |
|               | 1/12           | 22.00                        | 21.21                  | 21.03     | 20.74       |                | 1/24           | 22.00                        | 21.26                  | 21.08        | 21.09     |
|               | 1/24           | 22.00                        | 21.09                  | 20.93     | 20.69       |                | 1/49           | 22.00                        | 21.05                  | 20.95        | 20.94     |
|               | 12/0           | 21.00                        | 19.65                  | 19.83     | 19.88       |                | 25/0           | 21.00                        | 19.73                  | 19.76        | 19.85     |
|               | 12/6           | 21.00                        | 19.75                  | 19.87     | 19.84       |                | 25/12          | 21.00                        | 19.90                  | 19.89        | 19.89     |
|               | 12/13          | 21.00                        | 19.81                  | 19.83     | 19.79       |                | 25/25          | 21.00                        | 19.79                  | 19.77        | 19.74     |
|               | 25/0           | 21.00                        | 19.81                  | 19.79     | 19.81       |                | 50/0           | 21.00                        | 19.72                  | 19.77        | 19.72     |

Down Antenna Receiver off

| LTE B17/BW=5M |                | Average Conducted Power(dBm) |                        |           |             | LTE B17/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|---------------|----------------|------------------------------|------------------------|-----------|-------------|----------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|               |                |                              | 23755/706.5            | 23790/710 | 23825/713.5 |                |                |                              | 23780/709              | 23790/710    | 23800/711 |
| QPSK          | 1/0            | 24.00                        | 22.55                  | 22.62     | 22.52       | QPSK           | 1/0            | 24.00                        | 22.58                  | 22.57        | 22.57     |
|               | 1/12           | 24.00                        | 22.69                  | 22.70     | 22.63       |                | 1/24           | 24.00                        | 22.77                  | <b>22.78</b> | 22.71     |
|               | 1/24           | 24.00                        | 22.61                  | 22.57     | 22.43       |                | 1/49           | 24.00                        | 22.57                  | 22.63        | 22.52     |
|               | 12/0           | 23.00                        | 21.54                  | 21.60     | 21.70       |                | 25/0           | 23.00                        | 21.53                  | 21.54        | 21.65     |
|               | 12/6           | 23.00                        | 21.68                  | 21.65     | 21.61       |                | 25/12          | 23.00                        | <b>21.68</b>           | 21.65        | 21.62     |
|               | 12/13          | 23.00                        | 21.72                  | 21.60     | 21.55       |                | 25/25          | 23.00                        | 21.54                  | 21.47        | 21.42     |
|               | 25/0           | 23.00                        | 21.63                  | 21.59     | 21.58       |                | 50/0           | 23.00                        | 21.56                  | 21.58        | 21.53     |
| 16QAM         | 1/0            | 23.00                        | 21.63                  | 21.73     | 22.00       | 16QAM          | 1/0            | 23.00                        | 21.55                  | 21.96        | 21.61     |
|               | 1/12           | 23.00                        | 21.81                  | 21.75     | 22.09       |                | 1/24           | 23.00                        | 21.69                  | 22.07        | 21.69     |
|               | 1/24           | 23.00                        | 21.69                  | 21.63     | 22.04       |                | 1/49           | 23.00                        | 21.50                  | 21.90        | 21.57     |
|               | 12/0           | 22.00                        | 20.56                  | 20.63     | 20.79       |                | 25/0           | 22.00                        | 20.55                  | 20.57        | 20.66     |
|               | 12/6           | 22.00                        | 20.71                  | 20.70     | 20.77       |                | 25/12          | 22.00                        | 20.69                  | 20.65        | 20.66     |
|               | 12/13          | 22.00                        | 20.73                  | 20.63     | 20.69       |                | 25/25          | 22.00                        | 20.52                  | 20.47        | 20.48     |
|               | 25/0           | 22.00                        | 20.59                  | 20.57     | 20.68       |                | 50/0           | 22.00                        | 20.50                  | 20.52        | 20.57     |
| 64QAM         | 1/0            | 22.00                        | 20.85                  | 20.78     | 20.42       | 64QAM          | 1/0            | 22.00                        | 20.78                  | 20.91        | 20.76     |
|               | 1/12           | 22.00                        | 21.01                  | 20.84     | 20.56       |                | 1/24           | 22.00                        | 20.94                  | 21.05        | 20.87     |
|               | 1/24           | 22.00                        | 20.90                  | 20.72     | 20.50       |                | 1/49           | 22.00                        | 20.70                  | 20.89        | 20.76     |
|               | 12/0           | 21.00                        | 19.45                  | 19.65     | 19.69       |                | 25/0           | 21.00                        | 19.58                  | 19.59        | 19.71     |
|               | 12/6           | 21.00                        | 19.62                  | 19.68     | 19.68       |                | 25/12          | 21.00                        | 19.72                  | 19.69        | 19.71     |
|               | 12/13          | 21.00                        | 19.65                  | 19.63     | 19.61       |                | 25/25          | 21.00                        | 19.63                  | 19.52        | 19.55     |
|               | 25/0           | 21.00                        | 19.61                  | 19.61     | 19.60       |                | 50/0           | 21.00                        | 19.56                  | 19.55        | 19.60     |

Up Antenna Receiver on

| LTE B17/BW=5M |                | Average Conducted Power(dBm) |                        |           |             | LTE B17/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|---------------|----------------|------------------------------|------------------------|-----------|-------------|----------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|               |                |                              | 23755/706.5            | 23790/710 | 23825/713.5 |                |                |                              | 23780/709              | 23790/710    | 23800/711 |
| QPSK          | 1/0            | 24.00                        | 23.10                  | 23.18     | 23.07       | QPSK           | 1/0            | 24.00                        | 23.07                  | 23.15        | 23.09     |
|               | 1/12           | 24.00                        | 23.25                  | 23.26     | 23.22       |                | 1/24           | 24.00                        | 23.32                  | <b>23.37</b> | 23.33     |
|               | 1/24           | 24.00                        | 23.19                  | 23.17     | 23.04       |                | 1/49           | 24.00                        | 23.12                  | 23.20        | 23.12     |
|               | 12/0           | 23.00                        | 22.13                  | 22.18     | 22.21       |                | 25/0           | 23.00                        | 22.16                  | 22.17        | 22.21     |
|               | 12/6           | 23.00                        | 22.26                  | 22.22     | 22.18       |                | 25/12          | 23.00                        | 22.23                  | <b>22.24</b> | 22.23     |
|               | 12/13          | 23.00                        | 22.27                  | 22.20     | 22.12       |                | 25/25          | 23.00                        | 22.18                  | 22.13        | 22.09     |
|               | 25/0           | 23.00                        | 22.21                  | 22.19     | 22.13       |                | 50/0           | 23.00                        | 22.18                  | 22.19        | 22.17     |
| 16QAM         | 1/0            | 23.00                        | 22.19                  | 22.30     | 22.57       | 16QAM          | 1/0            | 23.00                        | 22.10                  | 22.51        | 22.16     |
|               | 1/12           | 23.00                        | 22.32                  | 22.37     | 22.66       |                | 1/24           | 23.00                        | 22.28                  | 22.68        | 22.30     |
|               | 1/24           | 23.00                        | 22.29                  | 22.27     | 22.63       |                | 1/49           | 23.00                        | 22.07                  | 22.52        | 22.17     |
|               | 12/0           | 22.00                        | 21.17                  | 21.23     | 21.29       |                | 25/0           | 22.00                        | 21.18                  | 21.20        | 21.30     |
|               | 12/6           | 22.00                        | 21.27                  | 21.28     | 21.32       |                | 25/12          | 22.00                        | 21.27                  | 21.27        | 21.30     |
|               | 12/13          | 22.00                        | 21.30                  | 21.26     | 21.29       |                | 25/25          | 22.00                        | 21.21                  | 21.17        | 21.16     |
|               | 25/0           | 22.00                        | 21.16                  | 21.20     | 21.22       |                | 50/0           | 22.00                        | 21.15                  | 21.20        | 21.19     |
| 64QAM         | 1/0            | 22.00                        | 21.43                  | 21.38     | 21.00       | 64QAM          | 1/0            | 22.00                        | 21.32                  | 21.45        | 21.28     |
|               | 1/12           | 22.00                        | 21.60                  | 21.40     | 21.13       |                | 1/24           | 22.00                        | 21.54                  | 21.63        | 21.46     |
|               | 1/24           | 22.00                        | 21.50                  | 21.33     | 21.03       |                | 1/49           | 22.00                        | 21.29                  | 21.49        | 21.34     |
|               | 12/0           | 21.00                        | 20.07                  | 20.21     | 20.20       |                | 25/0           | 21.00                        | 20.24                  | 20.19        | 20.27     |
|               | 12/6           | 21.00                        | 20.17                  | 20.25     | 20.23       |                | 25/12          | 21.00                        | 20.32                  | 20.28        | 20.31     |
|               | 12/13          | 21.00                        | 20.20                  | 20.24     | 20.17       |                | 25/25          | 21.00                        | 20.28                  | 20.19        | 20.20     |
|               | 25/0           | 21.00                        | 20.20                  | 20.19     | 20.14       |                | 50/0           | 21.00                        | 20.19                  | 20.19        | 20.22     |

Up Antenna Receiver off

| LTE B17/BW=5M |                | Average Conducted Power(dBm) |                        |           |             | LTE B17/BW=10M |                | Average Conducted Power(dBm) |                        |              |           |
|---------------|----------------|------------------------------|------------------------|-----------|-------------|----------------|----------------|------------------------------|------------------------|--------------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |           |
|               |                |                              | 23755/706.5            | 23790/710 | 23825/713.5 |                |                |                              | 23780/709              | 23790/710    | 23800/711 |
| QPSK          | 1/0            | 24.00                        | 23.51                  | 23.58     | 23.49       | QPSK           | 1/0            | 24.00                        | 23.50                  | 23.58        | 23.53     |
|               | 1/12           | 24.00                        | 23.64                  | 23.63     | 23.58       |                | 1/24           | 24.00                        | 23.70                  | <b>23.75</b> | 23.67     |
|               | 1/24           | 24.00                        | 23.54                  | 23.51     | 23.40       |                | 1/49           | 24.00                        | 23.51                  | 23.57        | 23.45     |
|               | 12/0           | 23.00                        | 22.53                  | 22.56     | 22.59       |                | 25/0           | 23.00                        | 22.57                  | 22.55        | 22.61     |
|               | 12/6           | 23.00                        | 22.63                  | 22.62     | 22.57       |                | 25/12          | 23.00                        | <b>22.62</b>           | 22.60        | 22.60     |
|               | 12/13          | 23.00                        | 22.66                  | 22.58     | 22.49       |                | 25/25          | 23.00                        | 22.56                  | 22.51        | 22.40     |
|               | 25/0           | 23.00                        | 22.59                  | 22.55     | 22.49       |                | 50/0           | 23.00                        | 22.57                  | 22.57        | 22.54     |
| 16QAM         | 1/0            | 23.00                        | 22.63                  | 22.71     | 22.97       | 16QAM          | 1/0            | 23.00                        | 22.50                  | 22.92        | 22.54     |
|               | 1/12           | 23.00                        | 22.70                  | 22.75     | 22.73       |                | 1/24           | 23.00                        | 22.64                  | 22.56        | 22.62     |
|               | 1/24           | 23.00                        | 22.67                  | 22.63     | 22.96       |                | 1/49           | 23.00                        | 22.47                  | 22.84        | 22.48     |
|               | 12/0           | 22.00                        | 21.55                  | 21.60     | 21.66       |                | 25/0           | 22.00                        | 21.58                  | 21.58        | 21.66     |
|               | 12/6           | 22.00                        | 21.64                  | 21.66     | 21.69       |                | 25/12          | 22.00                        | 21.65                  | 21.66        | 21.63     |
|               | 12/13          | 22.00                        | 21.66                  | 21.61     | 21.62       |                | 25/25          | 22.00                        | 21.57                  | 21.51        | 21.51     |
|               | 25/0           | 22.00                        | 21.55                  | 21.60     | 21.61       |                | 50/0           | 22.00                        | 21.52                  | 21.56        | 21.56     |
| 64QAM         | 1/0            | 22.00                        | 21.83                  | 21.75     | 21.42       | 64QAM          | 1/0            | 22.00                        | 21.87                  | 21.71        | 21.73     |
|               | 1/12           | 22.00                        | 21.95                  | 21.80     | 21.53       |                | 1/24           | 22.00                        | 21.74                  | 21.89        | 21.89     |
|               | 1/24           | 22.00                        | 21.87                  | 21.68     | 21.41       |                | 1/49           | 22.00                        | 21.84                  | 21.70        | 21.66     |
|               | 12/0           | 21.00                        | 20.47                  | 20.62     | 20.61       |                | 25/0           | 21.00                        | 20.61                  | 20.63        | 20.69     |
|               | 12/6           | 21.00                        | 20.56                  | 20.66     | 20.64       |                | 25/12          | 21.00                        | 20.66                  | 20.68        | 20.68     |
|               | 12/13          | 21.00                        | 20.56                  | 20.63     | 20.55       |                | 25/25          | 21.00                        | 20.62                  | 20.60        | 20.56     |
|               | 25/0           | 21.00                        | 20.56                  | 20.58     | 20.52       |                | 50/0           | 21.00                        | 20.58                  | 20.62        | 20.58     |

Note: The tested channels are marks in bold.

## 7. Conducted power measurement results of LTE B26

Down Antenna\_Receiver on

| LTE B26/BW=1.4M |                | Average Conducted Power(dBm) |                        |           |             | LTE B26/BW=3M |                | Average Conducted Power(dBm) |                        |           |             |
|-----------------|----------------|------------------------------|------------------------|-----------|-------------|---------------|----------------|------------------------------|------------------------|-----------|-------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             |
|                 |                |                              | 26697/814.7            | 26865/831 | 27033/848.3 |               |                |                              | 26705/815.5            | 26865/831 | 27025/847.5 |
| QPSK            | 1/0            | 24.00                        | 22.92                  | 22.99     | 22.98       | QPSK          | 1/0            | 24.00                        | 22.77                  | 22.80     | 22.75       |
|                 | 1/2            | 24.00                        | 23.03                  | 23.10     | 23.11       |               | 1/7            | 24.00                        | 22.92                  | 22.94     | 22.86       |
|                 | 1/5            | 24.00                        | 22.98                  | 23.00     | 23.02       |               | 1/14           | 24.00                        | 22.78                  | 22.79     | 22.73       |
|                 | 3/0            | 24.00                        | 23.05                  | 23.09     | 23.08       |               | 8/0            | 23.00                        | 22.07                  | 22.00     | 22.03       |
|                 | 3/1            | 24.00                        | 23.09                  | 23.11     | 23.15       |               | 8/3            | 23.00                        | 22.08                  | 22.03     | 22.04       |
|                 | 3/3            | 24.00                        | 23.09                  | 23.07     | 23.08       |               | 8/7            | 23.00                        | 22.03                  | 21.98     | 22.01       |
|                 | 6/0            | 23.00                        | 22.07                  | 22.03     | 22.04       |               | 15/0           | 23.00                        | 22.09                  | 22.02     | 21.99       |
| 16QAM           | 1/0            | 23.00                        | 22.00                  | 22.09     | 22.37       | 16QAM         | 1/0            | 23.00                        | 21.98                  | 22.41     | 22.03       |
|                 | 1/2            | 23.00                        | 22.09                  | 22.22     | 22.46       |               | 1/7            | 23.00                        | 22.12                  | 22.54     | 22.19       |
|                 | 1/5            | 23.00                        | 22.03                  | 22.09     | 22.40       |               | 1/14           | 23.00                        | 21.95                  | 22.39     | 22.02       |
|                 | 3/0            | 23.00                        | 22.18                  | 22.12     | 22.27       |               | 8/0            | 22.00                        | 21.18                  | 21.11     | 21.06       |
|                 | 3/1            | 23.00                        | 22.27                  | 22.15     | 22.29       |               | 8/3            | 22.00                        | 21.20                  | 21.15     | 21.10       |
|                 | 3/3            | 23.00                        | 22.25                  | 22.09     | 22.28       |               | 8/7            | 22.00                        | 21.16                  | 21.08     | 21.06       |
|                 | 6/0            | 22.00                        | 21.18                  | 21.19     | 20.99       |               | 15/0           | 22.00                        | 21.09                  | 21.01     | 20.96       |
| 64QAM           | 1/0            | 22.00                        | 21.09                  | 21.14     | 21.34       | 64QAM         | 1/0            | 22.00                        | 21.36                  | 21.12     | 21.16       |
|                 | 1/2            | 22.00                        | 21.25                  | 21.22     | 21.52       |               | 1/7            | 22.00                        | 21.50                  | 21.28     | 21.33       |
|                 | 1/5            | 22.00                        | 21.09                  | 21.15     | 21.42       |               | 1/14           | 22.00                        | 21.36                  | 21.18     | 21.15       |
|                 | 3/0            | 22.00                        | 21.14                  | 21.01     | 21.35       |               | 8/0            | 21.00                        | 20.10                  | 20.05     | 19.95       |
|                 | 3/1            | 22.00                        | 21.22                  | 21.04     | 21.40       |               | 8/3            | 21.00                        | 20.12                  | 20.09     | 19.97       |
|                 | 3/3            | 22.00                        | 21.19                  | 21.01     | 21.36       |               | 8/7            | 21.00                        | 20.06                  | 20.04     | 19.93       |
|                 | 6/0            | 21.00                        | 20.29                  | 20.09     | 19.96       |               | 15/0           | 21.00                        | 20.05                  | 20.00     | 20.00       |

| LTE B26/BW=5M |                | Average Conducted Power(dBm) |                        |           |             | LTE B26/BW=10M |                | Average Conducted Power(dBm) |                        |           |           |
|---------------|----------------|------------------------------|------------------------|-----------|-------------|----------------|----------------|------------------------------|------------------------|-----------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |           |
|               |                |                              | 26715/816.5            | 26865/831 | 27015/846.5 |                |                |                              | 26740/819              | 26865/831 | 26990/844 |
| QPSK          | 1/0            | 24.00                        | 23.05                  | 22.96     | 22.98       | QPSK           | 1/0            | 24.00                        | 23.02                  | 23.01     | 22.97     |
|               | 1/12           | 24.00                        | 23.15                  | 23.01     | 23.06       |                | 1/24           | 24.00                        | 23.14                  | 23.12     | 23.14     |
|               | 1/24           | 24.00                        | 23.11                  | 22.94     | 23.02       |                | 1/49           | 24.00                        | 23.05                  | 23.06     | 23.04     |
|               | 12/0           | 23.00                        | 22.04                  | 22.01     | 22.00       |                | 25/0           | 23.00                        | 22.05                  | 22.03     | 22.05     |
|               | 12/6           | 23.00                        | 22.08                  | 22.06     | 22.06       |                | 25/12          | 23.00                        | 22.09                  | 22.06     | 22.05     |
|               | 12/13          | 23.00                        | 22.10                  | 22.05     | 22.03       |                | 25/25          | 23.00                        | 22.13                  | 22.04     | 21.94     |
|               | 25/0           | 23.00                        | 22.05                  | 21.99     | 21.99       |                | 50/0           | 23.00                        | 22.11                  | 22.06     | 22.02     |
| 16QAM         | 1/0            | 23.00                        | 22.14                  | 22.44     | 22.03       | 16QAM          | 1/0            | 23.00                        | 21.96                  | 22.36     | 22.03     |
|               | 1/12           | 23.00                        | 22.25                  | 22.53     | 22.12       |                | 1/24           | 23.00                        | 22.16                  | 22.51     | 22.17     |
|               | 1/24           | 23.00                        | 22.15                  | 22.43     | 22.04       |                | 1/49           | 23.00                        | 21.98                  | 22.39     | 22.06     |
|               | 12/0           | 22.00                        | 21.11                  | 21.12     | 21.03       |                | 25/0           | 22.00                        | 21.06                  | 21.08     | 21.17     |
|               | 12/6           | 22.00                        | 21.15                  | 21.19     | 21.09       |                | 25/12          | 22.00                        | 21.12                  | 21.09     | 21.15     |
|               | 12/13          | 22.00                        | 21.18                  | 21.16     | 21.05       |                | 25/25          | 22.00                        | 21.16                  | 21.06     | 21.07     |
|               | 25/0           | 22.00                        | 21.09                  | 21.08     | 20.98       |                | 50/0           | 22.00                        | 21.08                  | 21.07     | 21.06     |
| 64QAM         | 1/0            | 22.00                        | 20.89                  | 21.24     | 21.15       | 64QAM          | 1/0            | 22.00                        | 21.30                  | 21.11     | 21.16     |
|               | 1/12           | 22.00                        | 21.05                  | 21.39     | 21.23       |                | 1/24           | 22.00                        | 21.52                  | 21.28     | 21.28     |
|               | 1/24           | 22.00                        | 20.97                  | 21.25     | 21.18       |                | 1/49           | 22.00                        | 21.36                  | 21.14     | 21.15     |
|               | 12/0           | 21.00                        | 20.03                  | 19.92     | 20.02       |                | 25/0           | 21.00                        | 20.05                  | 20.08     | 20.09     |
|               | 12/6           | 21.00                        | 20.10                  | 19.97     | 20.06       |                | 25/12          | 21.00                        | 20.11                  | 20.09     | 20.09     |
|               | 12/13          | 21.00                        | 20.12                  | 19.96     | 20.03       |                | 25/25          | 21.00                        | 20.16                  | 20.07     | 19.98     |
|               | 25/0           | 21.00                        | 20.03                  | 19.95     | 19.97       |                | 50/0           | 21.00                        | 20.08                  | 20.08     | 20.00     |

| LTE B26/BW=15M |                | Average Conducted Power(dBm) |                        |              |             |
|----------------|----------------|------------------------------|------------------------|--------------|-------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |             |
|                |                |                              | 26765/821.5            | 26865/831    | 26965/841.5 |
| QPSK           | 1/0            | 24.00                        | 22.92                  | 22.93        | 22.88       |
|                | 1/37           | 24.00                        | 22.98                  | <b>23.16</b> | 23.10       |
|                | 1/74           | 24.00                        | 22.91                  | 22.97        | 22.93       |
|                | 36/0           | 23.00                        | 21.98                  | <b>22.07</b> | 22.03       |
|                | 36/19          | 23.00                        | 22.02                  | 22.03        | 22.06       |
|                | 36/39          | 23.00                        | 22.05                  | 22.01        | 22.00       |
|                | 75/0           | 23.00                        | 22.00                  | 21.98        | 22.03       |
| 16QAM          | 1/0            | 23.00                        | 21.87                  | 22.25        | 21.80       |
|                | 1/37           | 23.00                        | 22.01                  | 22.43        | 21.95       |
|                | 1/74           | 23.00                        | 21.93                  | 22.34        | 21.83       |
|                | 36/0           | 22.00                        | 20.97                  | 21.04        | 21.01       |
|                | 36/19          | 22.00                        | 21.05                  | 21.09        | 21.01       |
|                | 36/39          | 22.00                        | 21.00                  | 21.05        | 20.90       |
|                | 75/0           | 22.00                        | 21.03                  | 21.01        | 21.01       |
| 64QAM          | 1/0            | 22.00                        | 21.45                  | 21.17        | 21.02       |
|                | 1/37           | 22.00                        | 21.59                  | 21.34        | 21.20       |
|                | 1/74           | 22.00                        | 21.52                  | 21.22        | 21.03       |
|                | 36/0           | 21.00                        | 19.89                  | 20.22        | 20.10       |
|                | 36/19          | 21.00                        | 20.02                  | 20.06        | 20.11       |
|                | 36/39          | 21.00                        | 20.01                  | 20.05        | 20.06       |
|                | 75/0           | 21.00                        | 20.03                  | 20.03        | 20.07       |

Down Antenna Receiver off

| LTE B26/BW=1.4M |                       |                 | Average Conducted Power(dBm) |               |                 | LTE B26/BW=3M   |                       |                 | Average Conducted Power(dBm) |               |                 |
|-----------------|-----------------------|-----------------|------------------------------|---------------|-----------------|-----------------|-----------------------|-----------------|------------------------------|---------------|-----------------|
| Modula<br>-tion | RB<br>Size/<br>Offset | Max.<br>Tune-up | Channel/Frequency(MHz)       |               |                 | Modula<br>-tion | RB<br>Size/<br>Offset | Max.<br>Tune-up | Channel/Frequency(MHz)       |               |                 |
|                 |                       |                 | 26697/<br>814.7              | 26865/<br>831 | 27033/<br>848.3 |                 |                       |                 | 26705/<br>815.5              | 26865/<br>831 | 27025/<br>847.5 |
| QPSK            | 1/0                   | 24.00           | 22.84                        | 22.88         | 22.83           | QPSK            | 1/0                   | 24.00           | 22.95                        | 22.99         | 22.83           |
|                 | 1/2                   | 24.00           | 23.02                        | 22.98         | 22.96           |                 | 1/7                   | 24.00           | 22.99                        | 22.98         | 22.89           |
|                 | 1/5                   | 24.00           | 22.84                        | 22.85         | 22.82           |                 | 1/14                  | 24.00           | 22.96                        | 22.92         | 22.85           |
|                 | 3/0                   | 24.00           | 22.95                        | 22.95         | 22.95           |                 | 8/0                   | 23.00           | 21.99                        | 21.91         | 21.88           |
|                 | 3/1                   | 24.00           | 23.02                        | 22.99         | 23.02           |                 | 8/3                   | 23.00           | 22.02                        | 21.90         | 21.90           |
|                 | 3/3                   | 24.00           | 23.00                        | 22.95         | 22.93           |                 | 8/7                   | 23.00           | 21.96                        | 21.86         | 21.86           |
|                 | 6/0                   | 23.00           | 21.94                        | 21.89         | 21.93           |                 | 15/0                  | 23.00           | 22.00                        | 21.89         | 21.89           |
| 16QAM           | 1/0                   | 23.00           | 21.88                        | 21.99         | 22.16           | 16QAM           | 1/0                   | 23.00           | 21.96                        | 21.89         | 22.23           |
|                 | 1/2                   | 23.00           | 21.97                        | 22.09         | 22.32           |                 | 1/7                   | 23.00           | 22.09                        | 21.96         | 22.39           |
|                 | 1/5                   | 23.00           | 21.87                        | 21.97         | 22.28           |                 | 1/14                  | 23.00           | 21.91                        | 21.86         | 22.28           |
|                 | 3/0                   | 23.00           | 22.09                        | 21.97         | 22.08           |                 | 8/0                   | 22.00           | 20.95                        | 21.03         | 20.98           |
|                 | 3/1                   | 23.00           | 22.14                        | 22.01         | 22.14           |                 | 8/3                   | 22.00           | 20.99                        | 21.04         | 20.99           |
|                 | 3/3                   | 23.00           | 22.10                        | 21.98         | 22.13           |                 | 8/7                   | 22.00           | 20.96                        | 20.98         | 20.96           |
|                 | 6/0                   | 22.00           | 21.11                        | 21.06         | 20.81           |                 | 15/0                  | 22.00           | 20.88                        | 20.93         | 20.90           |
| 64QAM           | 1/0                   | 22.00           | 21.04                        | 21.30         | 20.93           | 64QAM           | 1/0                   | 22.00           | 21.25                        | 21.04         | 21.04           |
|                 | 1/2                   | 22.00           | 21.12                        | 21.44         | 21.15           |                 | 1/7                   | 22.00           | 21.42                        | 21.19         | 21.22           |
|                 | 1/5                   | 22.00           | 21.08                        | 21.30         | 21.01           |                 | 1/14                  | 22.00           | 21.30                        | 21.07         | 21.03           |
|                 | 3/0                   | 22.00           | 20.89                        | 21.27         | 21.06           |                 | 8/0                   | 21.00           | 20.00                        | 19.95         | 19.82           |
|                 | 3/1                   | 22.00           | 20.93                        | 21.29         | 21.11           |                 | 8/3                   | 21.00           | 20.05                        | 19.99         | 19.85           |
|                 | 3/3                   | 22.00           | 20.91                        | 21.26         | 21.09           |                 | 8/7                   | 21.00           | 20.00                        | 19.95         | 19.82           |
|                 | 6/0                   | 21.00           | 19.99                        | 19.90         | 20.17           |                 | 15/0                  | 21.00           | 19.93                        | 19.93         | 19.88           |

| LTE B26/BW=5M |                | Average Conducted Power(dBm) |                        |           |             | LTE B26/BW=10M |                | Average Conducted Power(dBm) |                        |           |           |
|---------------|----------------|------------------------------|------------------------|-----------|-------------|----------------|----------------|------------------------------|------------------------|-----------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |           |
|               |                |                              | 26715/816.5            | 26865/831 | 27015/846.5 |                |                |                              | 26740/819              | 26865/831 | 26990/844 |
| QPSK          | 1/0            | 24.00                        | 23.00                  | 22.88     | 22.82       | QPSK           | 1/0            | 24.00                        | 22.96                  | 22.85     | 22.92     |
|               | 1/12           | 24.00                        | 23.02                  | 22.94     | 22.91       |                | 1/24           | 24.00                        | 23.04                  | 22.98     | 23.01     |
|               | 1/24           | 24.00                        | 22.97                  | 22.83     | 22.87       |                | 1/49           | 24.00                        | 22.91                  | 22.85     | 22.89     |
|               | 12/0           | 23.00                        | 21.98                  | 21.93     | 21.91       |                | 25/0           | 23.00                        | 21.97                  | 21.93     | 21.95     |
|               | 12/6           | 23.00                        | 22.01                  | 21.98     | 21.92       |                | 25/12          | 23.00                        | 22.00                  | 21.91     | 21.93     |
|               | 12/13          | 23.00                        | 22.00                  | 21.94     | 21.91       |                | 25/25          | 23.00                        | 22.03                  | 21.91     | 21.82     |
|               | 25/0           | 23.00                        | 22.00                  | 21.90     | 21.88       |                | 50/0           | 23.00                        | 22.01                  | 21.92     | 21.89     |
| 16QAM         | 1/0            | 23.00                        | 22.04                  | 22.34     | 21.90       | 16QAM          | 1/0            | 23.00                        | 21.91                  | 22.30     | 21.92     |
|               | 1/12           | 23.00                        | 22.14                  | 22.47     | 21.91       |                | 1/24           | 23.00                        | 22.03                  | 22.42     | 22.07     |
|               | 1/24           | 23.00                        | 22.04                  | 22.29     | 21.89       |                | 1/49           | 23.00                        | 21.89                  | 22.28     | 21.90     |
|               | 12/0           | 22.00                        | 21.02                  | 21.03     | 20.92       |                | 25/0           | 22.00                        | 20.99                  | 20.99     | 21.04     |
|               | 12/6           | 22.00                        | 21.06                  | 21.09     | 20.94       |                | 25/12          | 22.00                        | 21.04                  | 20.98     | 21.03     |
|               | 12/13          | 22.00                        | 21.07                  | 21.05     | 20.91       |                | 25/25          | 22.00                        | 21.05                  | 20.93     | 20.87     |
|               | 25/0           | 22.00                        | 21.01                  | 20.98     | 20.82       |                | 50/0           | 22.00                        | 20.97                  | 20.95     | 20.95     |
| 64QAM         | 1/0            | 22.00                        | 20.82                  | 21.16     | 21.04       | 64QAM          | 1/0            | 22.00                        | 21.23                  | 21.08     | 21.21     |
|               | 1/12           | 22.00                        | 20.95                  | 21.30     | 21.08       |                | 1/24           | 22.00                        | 21.44                  | 21.18     | 21.29     |
|               | 1/24           | 22.00                        | 20.85                  | 21.16     | 21.03       |                | 1/49           | 22.00                        | 21.21                  | 21.09     | 21.17     |
|               | 12/0           | 21.00                        | 20.00                  | 19.82     | 19.90       |                | 25/0           | 21.00                        | 19.97                  | 20.03     | 19.93     |
|               | 12/6           | 21.00                        | 19.99                  | 19.87     | 19.94       |                | 25/12          | 21.00                        | 20.02                  | 19.98     | 19.93     |
|               | 12/13          | 21.00                        | 20.01                  | 19.87     | 19.91       |                | 25/25          | 21.00                        | 20.05                  | 19.95     | 19.80     |
|               | 25/0           | 21.00                        | 19.92                  | 19.85     | 19.86       |                | 50/0           | 21.00                        | 19.98                  | 19.99     | 19.86     |

| LTE B26/BW=15M |                | Average Conducted Power(dBm) |                        |              |             |
|----------------|----------------|------------------------------|------------------------|--------------|-------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |             |
|                |                |                              | 26765/821.5            | 26865/831    | 26965/841.5 |
| QPSK           | 1/0            | 24.00                        | 22.84                  | 22.84        | 22.80       |
|                | 1/37           | 24.00                        | 22.98                  | <b>23.06</b> | 23.01       |
|                | 1/74           | 24.00                        | 22.75                  | 22.83        | 22.78       |
|                | 36/0           | 23.00                        | 21.88                  | 21.83        | 21.91       |
|                | 36/19          | 23.00                        | 21.93                  | <b>21.94</b> | 21.91       |
|                | 36/39          | 23.00                        | 21.90                  | 21.88        | 21.82       |
|                | 75/0           | 23.00                        | 21.86                  | 21.88        | 21.91       |
| 16QAM          | 1/0            | 23.00                        | 21.80                  | 22.14        | 22.25       |
|                | 1/37           | 23.00                        | 21.88                  | 22.27        | 22.41       |
|                | 1/74           | 23.00                        | 21.77                  | 22.16        | 22.21       |
|                | 36/0           | 22.00                        | 20.84                  | 21.16        | 20.88       |
|                | 36/19          | 22.00                        | 20.91                  | 20.96        | 20.88       |
|                | 36/39          | 22.00                        | 20.90                  | 20.86        | 20.74       |
|                | 75/0           | 22.00                        | 20.89                  | 20.89        | 20.90       |
| 64QAM          | 1/0            | 22.00                        | 21.13                  | 20.98        | 21.43       |
|                | 1/37           | 22.00                        | 21.18                  | 21.09        | 21.55       |
|                | 1/74           | 22.00                        | 21.07                  | 20.96        | 21.39       |
|                | 36/0           | 21.00                        | 19.89                  | 20.96        | 19.95       |
|                | 36/19          | 21.00                        | 19.97                  | 19.98        | 19.93       |
|                | 36/39          | 21.00                        | 19.93                  | 19.97        | 19.83       |
|                | 75/0           | 21.00                        | 19.93                  | 19.94        | 19.98       |

Up Antenna Receiver on

| LTE B26/BW=1.4M |                | Average Conducted Power(dBm) |                        |           |             | LTE B26/BW=3M |                | Average Conducted Power(dBm) |                        |           |             |
|-----------------|----------------|------------------------------|------------------------|-----------|-------------|---------------|----------------|------------------------------|------------------------|-----------|-------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             |
|                 |                |                              | 26697/814.7            | 26865/831 | 27033/848.3 |               |                |                              | 26705/815.5            | 26865/831 | 27025/847.5 |
| QPSK            | 1/0            | 24.00                        | 23.18                  | 23.28     | 23.25       | QPSK          | 1/0            | 24.00                        | 23.28                  | 23.31     | 23.26       |
|                 | 1/2            | 24.00                        | 23.29                  | 23.34     | 23.40       |               | 1/7            | 24.00                        | 23.42                  | 23.42     | 23.39       |
|                 | 1/5            | 24.00                        | 23.22                  | 23.25     | 23.26       |               | 1/14           | 24.00                        | 23.31                  | 23.33     | 23.26       |
|                 | 3/0            | 24.00                        | 23.31                  | 23.32     | 23.36       |               | 8/0            | 23.00                        | 22.31                  | 22.27     | 22.27       |
|                 | 3/1            | 24.00                        | 23.36                  | 23.37     | 23.39       |               | 8/3            | 23.00                        | 22.36                  | 22.32     | 22.32       |
|                 | 3/3            | 24.00                        | 23.36                  | 23.33     | 23.36       |               | 8/7            | 23.00                        | 22.32                  | 22.23     | 22.26       |
|                 | 6/0            | 23.00                        | 22.29                  | 22.32     | 22.33       |               | 15/0           | 23.00                        | 22.35                  | 22.29     | 22.26       |
| 16QAM           | 1/0            | 23.00                        | 22.25                  | 22.39     | 22.55       | 16QAM         | 1/0            | 23.00                        | 22.28                  | 22.69     | 22.26       |
|                 | 1/2            | 23.00                        | 22.36                  | 22.47     | 22.69       |               | 1/7            | 23.00                        | 22.39                  | 22.81     | 22.42       |
|                 | 1/5            | 23.00                        | 22.28                  | 22.38     | 22.67       |               | 1/14           | 23.00                        | 22.23                  | 22.62     | 22.29       |
|                 | 3/0            | 23.00                        | 22.47                  | 22.38     | 22.49       |               | 8/0            | 22.00                        | 21.45                  | 21.39     | 21.30       |
|                 | 3/1            | 23.00                        | 22.55                  | 22.40     | 22.52       |               | 8/3            | 22.00                        | 21.47                  | 21.43     | 21.35       |
|                 | 3/3            | 23.00                        | 22.52                  | 22.36     | 22.51       |               | 8/7            | 22.00                        | 21.43                  | 21.36     | 21.30       |
|                 | 6/0            | 22.00                        | 21.46                  | 21.45     | 21.24       |               | 15/0           | 22.00                        | 21.38                  | 21.30     | 21.20       |
| 64QAM           | 1/0            | 22.00                        | 21.41                  | 21.67     | 21.34       | 64QAM         | 1/0            | 22.00                        | 21.49                  | 21.62     | 21.36       |
|                 | 1/2            | 22.00                        | 21.51                  | 21.83     | 21.43       |               | 1/7            | 22.00                        | 21.64                  | 21.73     | 21.54       |
|                 | 1/5            | 22.00                        | 21.42                  | 21.65     | 21.35       |               | 1/14           | 22.00                        | 21.39                  | 21.58     | 21.50       |
|                 | 3/0            | 22.00                        | 21.29                  | 21.66     | 21.19       |               | 8/0            | 21.00                        | 20.22                  | 20.37     | 20.30       |
|                 | 3/1            | 22.00                        | 21.31                  | 21.69     | 21.24       |               | 8/3            | 21.00                        | 20.26                  | 20.39     | 20.34       |
|                 | 3/3            | 22.00                        | 21.27                  | 21.65     | 21.25       |               | 8/7            | 21.00                        | 20.24                  | 20.33     | 20.31       |
|                 | 6/0            | 21.00                        | 20.37                  | 20.27     | 20.33       |               | 15/0           | 21.00                        | 20.30                  | 20.28     | 20.25       |

| LTE B26/BW=5M |                | Average Conducted Power(dBm) |                        |           |             | LTE B26/BW=10M |                | Average Conducted Power(dBm) |                        |           |           |
|---------------|----------------|------------------------------|------------------------|-----------|-------------|----------------|----------------|------------------------------|------------------------|-----------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |           |
|               |                |                              | 26715/816.5            | 26865/831 | 27015/846.5 |                |                |                              | 26740/819              | 26865/831 | 26990/844 |
| QPSK          | 1/0            | 24.00                        | 23.33                  | 23.20     | 23.18       | QPSK           | 1/0            | 24.00                        | 23.26                  | 23.29     | 23.21     |
|               | 1/12           | 24.00                        | 23.42                  | 23.35     | 23.32       |                | 1/24           | 24.00                        | 23.41                  | 23.45     | 23.36     |
|               | 1/24           | 24.00                        | 23.35                  | 23.20     | 23.26       |                | 1/49           | 24.00                        | 23.32                  | 23.34     | 23.27     |
|               | 12/0           | 23.00                        | 22.28                  | 22.24     | 22.19       |                | 25/0           | 23.00                        | 22.25                  | 22.27     | 22.33     |
|               | 12/6           | 23.00                        | 22.35                  | 22.33     | 22.30       |                | 25/12          | 23.00                        | 22.33                  | 22.31     | 22.30     |
|               | 12/13          | 23.00                        | 22.38                  | 22.32     | 22.25       |                | 25/25          | 23.00                        | 22.29                  | 22.30     | 22.26     |
|               | 25/0           | 23.00                        | 22.31                  | 22.26     | 22.21       |                | 50/0           | 23.00                        | 22.28                  | 22.28     | 22.31     |
| 16QAM         | 1/0            | 23.00                        | 22.42                  | 22.75     | 22.28       | 16QAM          | 1/0            | 23.00                        | 22.21                  | 22.67     | 22.30     |
|               | 1/12           | 23.00                        | 22.51                  | 22.78     | 22.34       |                | 1/24           | 23.00                        | 22.39                  | 22.80     | 22.45     |
|               | 1/24           | 23.00                        | 22.44                  | 22.70     | 22.35       |                | 1/49           | 23.00                        | 22.26                  | 22.64     | 22.29     |
|               | 12/0           | 22.00                        | 21.31                  | 21.37     | 21.21       |                | 25/0           | 22.00                        | 21.28                  | 21.31     | 21.47     |
|               | 12/6           | 22.00                        | 21.43                  | 21.46     | 21.33       |                | 25/12          | 22.00                        | 21.37                  | 21.36     | 21.47     |
|               | 12/13          | 22.00                        | 21.45                  | 21.45     | 21.29       |                | 25/25          | 22.00                        | 21.32                  | 21.33     | 21.37     |
|               | 25/0           | 22.00                        | 21.35                  | 21.34     | 21.19       |                | 50/0           | 22.00                        | 21.28                  | 21.35     | 21.40     |
| 64QAM         | 1/0            | 22.00                        | 21.19                  | 21.54     | 21.43       | 64QAM          | 1/0            | 22.00                        | 21.55                  | 21.40     | 21.40     |
|               | 1/12           | 22.00                        | 21.26                  | 21.68     | 21.54       |                | 1/24           | 22.00                        | 21.75                  | 21.60     | 21.59     |
|               | 1/24           | 22.00                        | 21.23                  | 21.51     | 21.43       |                | 1/49           | 22.00                        | 21.60                  | 21.43     | 21.41     |
|               | 12/0           | 21.00                        | 20.25                  | 20.14     | 20.24       |                | 25/0           | 21.00                        | 20.28                  | 20.31     | 20.40     |
|               | 12/6           | 21.00                        | 20.37                  | 20.25     | 20.29       |                | 25/12          | 21.00                        | 20.36                  | 20.37     | 20.36     |
|               | 12/13          | 21.00                        | 20.38                  | 20.24     | 20.24       |                | 25/25          | 21.00                        | 20.31                  | 20.34     | 20.29     |
|               | 25/0           | 21.00                        | 20.26                  | 20.22     | 20.16       |                | 50/0           | 21.00                        | 20.27                  | 20.33     | 20.32     |

| LTE B26/BW=15M |                | Average Conducted Power(dBm) |                        |              |              |
|----------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|                |                |                              | 26765/821.5            | 26865/831    | 26965/841.5  |
| QPSK           | 1/0            | 24.00                        | 23.14                  | 23.17        | 23.11        |
|                | 1/37           | 24.00                        | 23.27                  | <b>23.46</b> | 23.29        |
|                | 1/74           | 24.00                        | 23.15                  | 23.22        | 23.22        |
|                | 36/0           | 23.00                        | 22.22                  | 22.22        | <b>22.37</b> |
|                | 36/19          | 23.00                        | 22.33                  | 22.31        | 22.30        |
|                | 36/39          | 23.00                        | 22.28                  | 22.28        | 22.31        |
|                | 75/0           | 23.00                        | 22.24                  | 22.24        | 22.36        |
| 16QAM          | 1/0            | 23.00                        | 22.57                  | 22.08        | 22.49        |
|                | 1/37           | 23.00                        | 22.72                  | 22.26        | 22.74        |
|                | 1/74           | 23.00                        | 22.68                  | 22.19        | 22.57        |
|                | 36/0           | 22.00                        | 21.16                  | 21.19        | 21.41        |
|                | 36/19          | 22.00                        | 21.23                  | 21.29        | 21.38        |
|                | 36/39          | 22.00                        | 21.23                  | 21.26        | 21.40        |
|                | 75/0           | 22.00                        | 21.20                  | 21.26        | 21.39        |
| 64QAM          | 1/0            | 22.00                        | 21.47                  | 21.28        | 21.69        |
|                | 1/37           | 22.00                        | 21.57                  | 21.42        | 21.95        |
|                | 1/74           | 22.00                        | 21.52                  | 21.36        | 21.77        |
|                | 36/0           | 21.00                        | 20.26                  | 20.36        | 20.31        |
|                | 36/19          | 21.00                        | 20.34                  | 20.37        | 20.34        |
|                | 36/39          | 21.00                        | 20.33                  | 20.35        | 20.31        |
|                | 75/0           | 21.00                        | 20.28                  | 20.29        | 20.45        |

Up Antenna Receiver off

| LTE B26/BW=1.4M |                | Average Conducted Power(dBm) |                        |           |             | LTE B26/BW=3M |                | Average Conducted Power(dBm) |                        |           |             |
|-----------------|----------------|------------------------------|------------------------|-----------|-------------|---------------|----------------|------------------------------|------------------------|-----------|-------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             |
|                 |                |                              | 26697/814.7            | 26865/831 | 27033/848.3 |               |                |                              | 26705/815.5            | 26865/831 | 27025/847.5 |
| QPSK            | 1/0            | 24.00                        | 23.16                  | 23.21     | 23.21       | QPSK          | 1/0            | 24.00                        | 23.25                  | 23.26     | 23.23       |
|                 | 1/2            | 24.00                        | 23.31                  | 23.32     | 23.34       |               | 1/7            | 24.00                        | 23.40                  | 23.41     | 23.35       |
|                 | 1/5            | 24.00                        | 23.20                  | 23.19     | 23.23       |               | 1/14           | 24.00                        | 23.29                  | 23.30     | 23.24       |
|                 | 3/0            | 24.00                        | 23.31                  | 23.30     | 23.31       |               | 8/0            | 23.00                        | 22.29                  | 22.23     | 22.24       |
|                 | 3/1            | 24.00                        | 23.36                  | 23.34     | 23.33       |               | 8/3            | 23.00                        | 22.31                  | 22.27     | 22.27       |
|                 | 3/3            | 24.00                        | 23.32                  | 23.29     | 23.35       |               | 8/7            | 23.00                        | 22.28                  | 22.24     | 22.22       |
|                 | 6/0            | 23.00                        | 22.28                  | 22.26     | 22.28       |               | 15/0           | 23.00                        | 22.29                  | 22.24     | 22.22       |
| 16QAM           | 1/0            | 23.00                        | 22.27                  | 22.38     | 22.49       | 16QAM         | 1/0            | 23.00                        | 22.29                  | 22.62     | 22.26       |
|                 | 1/2            | 23.00                        | 22.34                  | 22.43     | 22.65       |               | 1/7            | 23.00                        | 22.37                  | 22.78     | 22.43       |
|                 | 1/5            | 23.00                        | 22.29                  | 22.35     | 22.55       |               | 1/14           | 23.00                        | 22.23                  | 22.66     | 22.22       |
|                 | 3/0            | 23.00                        | 22.46                  | 22.34     | 22.45       |               | 8/0            | 22.00                        | 21.41                  | 21.35     | 21.27       |
|                 | 3/1            | 23.00                        | 22.51                  | 22.38     | 22.48       |               | 8/3            | 22.00                        | 21.45                  | 21.40     | 21.31       |
|                 | 3/3            | 23.00                        | 22.48                  | 22.32     | 22.49       |               | 8/7            | 22.00                        | 21.41                  | 21.33     | 21.26       |
|                 | 6/0            | 22.00                        | 21.45                  | 21.41     | 21.20       |               | 15/0           | 22.00                        | 21.34                  | 21.28     | 21.18       |
| 64QAM           | 1/0            | 22.00                        | 21.37                  | 21.38     | 21.59       | 64QAM         | 1/0            | 22.00                        | 21.62                  | 21.36     | 21.41       |
|                 | 1/2            | 22.00                        | 21.50                  | 21.50     | 21.78       |               | 1/7            | 22.00                        | 21.78                  | 21.53     | 21.51       |
|                 | 1/5            | 22.00                        | 21.32                  | 21.38     | 21.64       |               | 1/14           | 22.00                        | 21.54                  | 21.42     | 21.44       |
|                 | 3/0            | 22.00                        | 21.42                  | 21.25     | 21.57       |               | 8/0            | 21.00                        | 20.37                  | 20.29     | 20.18       |
|                 | 3/1            | 22.00                        | 21.50                  | 21.29     | 21.61       |               | 8/3            | 21.00                        | 20.42                  | 20.34     | 20.21       |
|                 | 3/3            | 22.00                        | 21.45                  | 21.27     | 21.60       |               | 8/7            | 21.00                        | 20.36                  | 20.29     | 20.16       |
|                 | 6/0            | 21.00                        | 20.55                  | 20.35     | 20.28       |               | 15/0           | 21.00                        | 20.31                  | 20.27     | 20.25       |

| LTE B26/BW=5M |                | Average Conducted Power(dBm) |                        |           |             | LTE B26/BW=10M |                | Average Conducted Power(dBm) |                        |           |           |
|---------------|----------------|------------------------------|------------------------|-----------|-------------|----------------|----------------|------------------------------|------------------------|-----------|-----------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |             | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |           |           |
|               |                |                              | 26715/816.5            | 26865/831 | 27015/846.5 |                |                |                              | 26740/819              | 26865/831 | 26990/844 |
| QPSK          | 1/0            | 24.00                        | 23.31                  | 23.22     | 23.19       | QPSK           | 1/0            | 24.00                        | 23.27                  | 23.30     | 23.24     |
|               | 1/12           | 24.00                        | 23.41                  | 23.33     | 23.27       |                | 1/24           | 24.00                        | 23.40                  | 23.42     | 23.34     |
|               | 1/24           | 24.00                        | 23.26                  | 23.17     | 23.23       |                | 1/49           | 24.00                        | 23.26                  | 23.30     | 23.24     |
|               | 12/0           | 23.00                        | 22.24                  | 22.21     | 22.14       |                | 25/0           | 23.00                        | 22.22                  | 22.24     | 22.37     |
|               | 12/6           | 23.00                        | 22.29                  | 22.30     | 22.30       |                | 25/12          | 23.00                        | 22.30                  | 22.29     | 22.32     |
|               | 12/13          | 23.00                        | 22.33                  | 22.30     | 22.25       |                | 25/25          | 23.00                        | 22.27                  | 22.28     | 22.24     |
|               | 25/0           | 23.00                        | 22.26                  | 22.24     | 22.20       |                | 50/0           | 23.00                        | 22.22                  | 22.27     | 22.32     |
| 16QAM         | 1/0            | 23.00                        | 22.42                  | 22.78     | 22.28       | 16QAM          | 1/0            | 23.00                        | 22.25                  | 22.69     | 22.33     |
|               | 1/12           | 23.00                        | 22.51                  | 22.81     | 22.34       |                | 1/24           | 23.00                        | 22.38                  | 22.78     | 22.44     |
|               | 1/24           | 23.00                        | 22.40                  | 22.65     | 22.28       |                | 1/49           | 23.00                        | 22.25                  | 22.58     | 22.27     |
|               | 12/0           | 22.00                        | 21.33                  | 21.34     | 21.20       |                | 25/0           | 22.00                        | 21.27                  | 21.29     | 21.49     |
|               | 12/6           | 22.00                        | 21.40                  | 21.43     | 21.31       |                | 25/12          | 22.00                        | 21.35                  | 21.33     | 21.44     |
|               | 12/13          | 22.00                        | 21.43                  | 21.43     | 21.26       |                | 25/25          | 22.00                        | 21.28                  | 21.31     | 21.36     |
|               | 25/0           | 22.00                        | 21.30                  | 21.32     | 21.15       |                | 50/0           | 22.00                        | 21.23                  | 21.30     | 21.37     |
| 64QAM         | 1/0            | 22.00                        | 21.18                  | 21.54     | 21.43       | 64QAM          | 1/0            | 22.00                        | 21.60                  | 21.46     | 21.47     |
|               | 1/12           | 22.00                        | 21.29                  | 21.65     | 21.46       |                | 1/24           | 22.00                        | 21.73                  | 21.52     | 21.58     |
|               | 1/24           | 22.00                        | 21.18                  | 21.44     | 21.40       |                | 1/49           | 22.00                        | 21.60                  | 21.36     | 21.40     |
|               | 12/0           | 21.00                        | 20.27                  | 20.14     | 20.22       |                | 25/0           | 21.00                        | 20.27                  | 20.31     | 20.43     |
|               | 12/6           | 21.00                        | 20.35                  | 20.25     | 20.29       |                | 25/12          | 21.00                        | 20.35                  | 20.33     | 20.38     |
|               | 12/13          | 21.00                        | 20.35                  | 20.24     | 20.24       |                | 25/25          | 21.00                        | 20.27                  | 20.33     | 20.28     |
|               | 25/0           | 21.00                        | 20.24                  | 20.21     | 20.17       |                | 50/0           | 21.00                        | 20.25                  | 20.33     | 20.31     |

| LTE B26/BW=15M |                | Average Conducted Power(dBm) |                        |              |              |
|----------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|                |                |                              | 26765/821.5            | 26865/831    | 26965/841.5  |
| QPSK           | 1/0            | 24.00                        | 23.29                  | 23.32        | 23.26        |
|                | 1/37           | 24.00                        | 23.31                  | <b>23.44</b> | 23.36        |
|                | 1/74           | 24.00                        | 23.20                  | 23.31        | 23.27        |
|                | 36/0           | 23.00                        | 22.22                  | 22.21        | <b>22.37</b> |
|                | 36/19          | 23.00                        | 22.29                  | 22.25        | 22.28        |
|                | 36/39          | 23.00                        | 22.27                  | 22.24        | 22.26        |
|                | 75/0           | 23.00                        | 22.21                  | 22.20        | 22.33        |
| 16QAM          | 1/0            | 23.00                        | 22.19                  | 22.14        | 22.50        |
|                | 1/37           | 23.00                        | 22.23                  | 22.24        | 22.72        |
|                | 1/74           | 23.00                        | 22.17                  | 22.07        | 22.51        |
|                | 36/0           | 22.00                        | 21.22                  | 21.37        | 21.41        |
|                | 36/19          | 22.00                        | 21.28                  | 21.25        | 21.35        |
|                | 36/39          | 22.00                        | 21.25                  | 21.20        | 21.37        |
|                | 75/0           | 22.00                        | 21.22                  | 21.21        | 21.40        |
| 64QAM          | 1/0            | 22.00                        | 21.82                  | 21.49        | 21.27        |
|                | 1/37           | 22.00                        | 21.83                  | 21.59        | 21.46        |
|                | 1/74           | 22.00                        | 21.79                  | 21.47        | 21.24        |
|                | 36/0           | 21.00                        | 20.21                  | 20.47        | 20.47        |
|                | 36/19          | 21.00                        | 20.28                  | 20.31        | 20.38        |
|                | 36/39          | 21.00                        | 20.24                  | 20.25        | 20.36        |
|                | 75/0           | 21.00                        | 20.27                  | 20.26        | 20.43        |

Note: The tested channels are marks in bold.

## 8. Conducted power measurement results of LTE B38

Down Antenna\_Receiver on

| LTE B38/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B38/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|---------------|----------------|------------------------------|------------------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|               |                |                              | 37775/2572.5           | 38000/2595 | 38225/2617.5 |                |                |                              | 37800/2575             | 38000/2595 | 38200/2615 |
| QPSK          | 1/0            | 23.50                        | 22.68                  | 22.64      | 22.60        | QPSK           | 1/0            | 23.50                        | 22.77                  | 22.77      | 22.70      |
|               | 1/12           | 23.50                        | 22.80                  | 22.74      | 22.73        |                | 1/24           | 23.50                        | 22.83                  | 22.86      | 22.81      |
|               | 1/24           | 23.50                        | 22.67                  | 22.59      | 22.61        |                | 1/49           | 23.50                        | 22.75                  | 22.79      | 22.74      |
|               | 12/0           | 22.50                        | 21.82                  | 21.76      | 21.78        |                | 25/0           | 22.50                        | 21.86                  | 21.85      | 21.82      |
|               | 12/6           | 22.50                        | 21.88                  | 21.89      | 21.89        |                | 25/12          | 22.50                        | 21.90                  | 21.78      | 21.86      |
|               | 12/13          | 22.50                        | 21.86                  | 21.79      | 21.86        |                | 25/25          | 22.50                        | 21.83                  | 21.77      | 21.86      |
|               | 25/0           | 22.50                        | 21.84                  | 21.75      | 21.82        |                | 50/0           | 22.50                        | 21.86                  | 21.80      | 21.85      |
| 16QAM         | 1/0            | 22.50                        | 21.75                  | 21.55      | 21.64        | 16QAM          | 1/0            | 22.50                        | 21.72                  | 21.70      | 21.84      |
|               | 1/12           | 22.50                        | 21.85                  | 21.69      | 21.80        |                | 1/24           | 22.50                        | 21.84                  | 21.85      | 22.03      |
|               | 1/24           | 22.50                        | 21.72                  | 21.53      | 21.66        |                | 1/49           | 22.50                        | 21.68                  | 21.68      | 21.90      |
|               | 12/0           | 21.50                        | 20.92                  | 20.79      | 20.78        |                | 25/0           | 21.50                        | 20.94                  | 20.92      | 20.89      |
|               | 12/6           | 21.50                        | 20.99                  | 20.91      | 20.89        |                | 25/12          | 21.50                        | 20.96                  | 20.88      | 20.92      |
|               | 12/13          | 21.50                        | 20.97                  | 20.85      | 20.84        |                | 25/25          | 21.50                        | 20.87                  | 20.84      | 20.92      |
|               | 25/0           | 21.50                        | 20.91                  | 20.81      | 20.90        |                | 50/0           | 21.50                        | 20.92                  | 20.89      | 20.95      |
| 64QAM         | 1/0            | 21.50                        | 20.88                  | 20.43      | 21.10        | 64QAM          | 1/0            | 21.50                        | 20.45                  | 21.04      | 20.82      |
|               | 1/12           | 21.50                        | 20.96                  | 20.58      | 21.25        |                | 1/24           | 21.50                        | 20.58                  | 21.24      | 21.01      |
|               | 1/24           | 21.50                        | 20.82                  | 20.40      | 21.12        |                | 1/49           | 21.50                        | 20.42                  | 21.04      | 20.91      |
|               | 12/0           | 20.50                        | 19.56                  | 19.61      | 19.77        |                | 25/0           | 20.50                        | 19.78                  | 19.70      | 19.67      |
|               | 12/6           | 20.50                        | 19.63                  | 19.70      | 19.88        |                | 25/12          | 20.50                        | 19.73                  | 19.63      | 19.69      |
|               | 12/13          | 20.50                        | 19.59                  | 19.62      | 19.84        |                | 25/25          | 20.50                        | 19.72                  | 19.67      | 19.68      |
|               | 25/0           | 20.50                        | 19.56                  | 19.65      | 19.70        |                | 50/0           | 20.50                        | 19.70                  | 19.60      | 19.74      |

| LTE B38/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B38/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |
|----------------|----------------|------------------------------|------------------------|------------|--------------|----------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|                |                |                              | 37825/2577.5           | 38000/2595 | 38175/2612.5 |                |                |                              | 37850/2580             | 38000/2595   | 38150/2610 |
| QPSK           | 1/0            | 23.50                        | 22.67                  | 22.70      | 22.66        | QPSK           | 1/0            | 23.50                        | 22.51                  | 22.55        | 22.57      |
|                | 1/37           | 23.50                        | 22.76                  | 22.78      | 22.80        |                | 1/50           | 23.50                        | 22.84                  | <b>22.86</b> | 22.86      |
|                | 1/74           | 23.50                        | 22.62                  | 22.63      | 22.68        |                | 1/99           | 23.50                        | 22.45                  | 22.47        | 22.55      |
|                | 36/0           | 22.50                        | 21.84                  | 21.80      | 21.78        |                | 50/0           | 22.50                        | 21.74                  | 21.76        | 21.73      |
|                | 36/19          | 22.50                        | 21.85                  | 21.82      | 21.78        |                | 50/25          | 22.50                        | 21.78                  | <b>21.80</b> | 21.78      |
|                | 36/39          | 22.50                        | 21.81                  | 21.73      | 21.81        |                | 50/50          | 22.50                        | 21.70                  | 21.72        | 21.77      |
|                | 75/0           | 22.50                        | 21.83                  | 21.79      | 21.79        |                | 100/0          | 22.50                        | 21.70                  | 21.72        | 21.73      |
| 16QAM          | 1/0            | 22.50                        | 21.64                  | 21.63      | 21.66        | 16QAM          | 1/0            | 22.50                        | 21.53                  | 21.39        | 21.59      |
|                | 1/37           | 22.50                        | 21.72                  | 21.72      | 21.83        |                | 1/50           | 22.50                        | 21.76                  | 21.72        | 21.93      |
|                | 1/74           | 22.50                        | 21.57                  | 21.61      | 21.72        |                | 1/99           | 22.50                        | 21.44                  | 21.35        | 21.64      |
|                | 36/0           | 21.50                        | 20.81                  | 20.78      | 20.78        |                | 50/0           | 21.50                        | 20.82                  | 20.84        | 20.78      |
|                | 36/19          | 21.50                        | 20.84                  | 20.79      | 20.80        |                | 50/25          | 21.50                        | 20.87                  | 20.87        | 20.86      |
|                | 36/39          | 21.50                        | 20.80                  | 20.71      | 20.81        |                | 50/50          | 21.50                        | 20.77                  | 20.82        | 20.85      |
|                | 75/0           | 21.50                        | 20.85                  | 20.79      | 20.81        |                | 100/0          | 21.50                        | 20.81                  | 20.79        | 20.77      |
| 64QAM          | 1/0            | 21.50                        | 20.35                  | 20.94      | 20.52        | 64QAM          | 1/0            | 21.50                        | 20.99                  | 20.47        | 20.85      |
|                | 1/37           | 21.50                        | 20.47                  | 21.05      | 20.68        |                | 1/50           | 21.50                        | 21.27                  | 20.79        | 21.18      |
|                | 1/74           | 21.50                        | 20.29                  | 20.96      | 20.59        |                | 1/99           | 21.50                        | 20.92                  | 20.46        | 20.94      |
|                | 36/0           | 20.50                        | 19.79                  | 19.83      | 19.66        |                | 50/0           | 20.50                        | 19.68                  | 19.65        | 19.61      |
|                | 36/19          | 20.50                        | 19.80                  | 19.85      | 19.67        |                | 50/25          | 20.50                        | 19.71                  | 19.70        | 19.67      |
|                | 36/39          | 20.50                        | 19.78                  | 19.74      | 19.69        |                | 50/50          | 20.50                        | 19.63                  | 19.59        | 19.65      |
|                | 75/0           | 20.50                        | 19.74                  | 19.77      | 19.72        |                | 100/0          | 20.50                        | 19.62                  | 19.59        | 19.60      |

Down Antenna Receiver off

| LTE B38/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B38/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|---------------|----------------|------------------------------|------------------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|               |                |                              | 37775/2572.5           | 38000/2595 | 38225/2617.5 |                |                |                              | 37800/2575             | 38000/2595 | 38200/2615 |
| QPSK          | 1/0            | 22.50                        | 21.38                  | 21.31      | 21.38        | QPSK           | 1/0            | 22.50                        | 21.44                  | 21.56      | 21.46      |
|               | 1/12           | 22.50                        | 21.50                  | 21.45      | 21.52        |                | 1/24           | 22.50                        | 21.70                  | 21.80      | 21.74      |
|               | 1/24           | 22.50                        | 21.40                  | 21.27      | 21.39        |                | 1/49           | 22.50                        | 21.41                  | 21.50      | 21.46      |
|               | 12/0           | 22.50                        | 21.52                  | 21.45      | 21.47        |                | 25/0           | 22.50                        | 21.57                  | 21.52      | 21.53      |
|               | 12/6           | 22.50                        | 21.54                  | 21.47      | 21.50        |                | 25/12          | 22.50                        | 21.51                  | 21.47      | 21.54      |
|               | 12/13          | 22.50                        | 21.53                  | 21.45      | 21.52        |                | 25/25          | 22.50                        | 21.54                  | 21.47      | 21.54      |
|               | 25/0           | 22.50                        | 21.49                  | 21.41      | 21.50        |                | 50/0           | 22.50                        | 21.55                  | 21.50      | 21.53      |
| 16QAM         | 1/0            | 22.50                        | 21.67                  | 21.67      | 21.56        | 16QAM          | 1/0            | 22.50                        | 21.77                  | 21.82      | 21.76      |
|               | 1/12           | 22.50                        | 21.80                  | 21.79      | 21.71        |                | 1/24           | 22.50                        | 21.68                  | 21.75      | 21.82      |
|               | 1/24           | 22.50                        | 21.62                  | 21.62      | 21.58        |                | 1/49           | 22.50                        | 21.69                  | 21.78      | 21.81      |
|               | 12/0           | 21.50                        | 20.52                  | 20.56      | 20.55        |                | 25/0           | 21.50                        | 20.63                  | 20.56      | 20.54      |
|               | 12/6           | 21.50                        | 20.58                  | 20.57      | 20.58        |                | 25/12          | 21.50                        | 20.60                  | 20.51      | 20.55      |
|               | 12/13          | 21.50                        | 20.57                  | 20.57      | 20.60        |                | 25/25          | 21.50                        | 20.60                  | 20.49      | 20.59      |
|               | 25/0           | 21.50                        | 20.58                  | 20.45      | 20.54        |                | 50/0           | 21.50                        | 20.61                  | 20.52      | 20.57      |
| 64QAM         | 1/0            | 21.50                        | 20.73                  | 20.93      | 20.52        | 64QAM          | 1/0            | 21.50                        | 20.39                  | 20.97      | 20.68      |
|               | 1/12           | 21.50                        | 20.86                  | 20.66      | 20.68        |                | 1/24           | 21.50                        | 20.61                  | 20.72      | 20.96      |
|               | 1/24           | 21.50                        | 20.70                  | 20.89      | 20.54        |                | 1/49           | 21.50                        | 20.34                  | 20.94      | 20.73      |
|               | 12/0           | 20.50                        | 19.35                  | 19.47      | 19.44        |                | 25/0           | 20.50                        | 19.53                  | 19.36      | 19.34      |
|               | 12/6           | 20.50                        | 19.38                  | 19.49      | 19.47        |                | 25/12          | 20.50                        | 19.46                  | 19.32      | 19.37      |
|               | 12/13          | 20.50                        | 19.45                  | 19.50      | 19.47        |                | 25/25          | 20.50                        | 19.42                  | 19.32      | 19.37      |
|               | 25/0           | 20.50                        | 19.30                  | 19.32      | 19.48        |                | 50/0           | 20.50                        | 19.45                  | 19.30      | 19.42      |

| LTE B38/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B38/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |
|----------------|----------------|------------------------------|------------------------|------------|--------------|----------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|                |                |                              | 37825/2577.5           | 38000/2595 | 38175/2612.5 |                |                |                              | 37850/2580             | 38000/2595   | 38150/2610 |
| QPSK           | 1/0            | 22.50                        | 21.38                  | 21.49      | 21.42        | QPSK           | 1/0            | 22.50                        | 21.39                  | 21.41        | 21.40      |
|                | 1/37           | 22.50                        | 21.43                  | 21.56      | 21.53        |                | 1/50           | 22.50                        | 21.85                  | <b>21.88</b> | 21.83      |
|                | 1/74           | 22.50                        | 21.27                  | 21.39      | 21.39        |                | 1/99           | 22.50                        | 21.32                  | 21.29        | 21.37      |
|                | 36/0           | 22.50                        | 21.52                  | 21.53      | 21.48        |                | 50/0           | 22.50                        | 21.50                  | 21.46        | 21.42      |
|                | 36/19          | 22.50                        | 21.63                  | 21.50      | 21.49        |                | 50/25          | 22.50                        | <b>21.53</b>           | 21.46        | 21.45      |
|                | 36/39          | 22.50                        | 21.50                  | 21.44      | 21.49        |                | 50/50          | 22.50                        | 21.43                  | 21.39        | 21.43      |
|                | 75/0           | 22.50                        | 21.54                  | 21.49      | 21.50        |                | 100/0          | 22.50                        | 21.46                  | 21.42        | 21.41      |
| 16QAM          | 1/0            | 22.50                        | 21.66                  | 21.77      | 21.63        | 16QAM          | 1/0            | 22.50                        | 21.55                  | 21.36        | 21.55      |
|                | 1/37           | 22.50                        | 21.71                  | 21.83      | 21.76        |                | 1/50           | 22.50                        | 21.77                  | 21.81        | 21.81      |
|                | 1/74           | 22.50                        | 21.57                  | 21.72      | 21.64        |                | 1/99           | 22.50                        | 21.46                  | 21.28        | 21.60      |
|                | 36/0           | 21.50                        | 20.54                  | 20.46      | 20.47        |                | 50/0           | 21.50                        | 20.55                  | 20.51        | 20.47      |
|                | 36/19          | 21.50                        | 20.53                  | 20.45      | 20.47        |                | 50/25          | 21.50                        | 20.57                  | 20.49        | 20.51      |
|                | 36/39          | 21.50                        | 20.54                  | 20.39      | 20.49        |                | 50/50          | 21.50                        | 20.50                  | 20.44        | 20.49      |
|                | 75/0           | 21.50                        | 20.56                  | 20.46      | 20.47        |                | 100/0          | 21.50                        | 20.54                  | 20.47        | 20.43      |
| 64QAM          | 1/0            | 21.50                        | 20.28                  | 20.88      | 20.44        | 64QAM          | 1/0            | 21.50                        | 20.78                  | 20.35        | 20.53      |
|                | 1/37           | 21.50                        | 20.32                  | 20.97      | 20.60        |                | 1/50           | 21.50                        | 20.76                  | 20.80        | 20.51      |
|                | 1/74           | 21.50                        | 20.16                  | 20.87      | 20.50        |                | 1/99           | 21.50                        | 20.69                  | 20.31        | 20.60      |
|                | 36/0           | 20.50                        | 19.51                  | 19.49      | 19.39        |                | 50/0           | 20.50                        | 19.40                  | 19.37        | 19.36      |
|                | 36/19          | 20.50                        | 19.52                  | 19.49      | 19.39        |                | 50/25          | 20.50                        | 19.40                  | 19.35        | 19.37      |
|                | 36/39          | 20.50                        | 19.48                  | 19.42      | 19.37        |                | 50/50          | 20.50                        | 19.32                  | 19.25        | 19.39      |
|                | 75/0           | 20.50                        | 19.45                  | 19.43      | 19.42        |                | 100/0          | 20.50                        | 19.33                  | 19.29        | 19.35      |

Up Antenna Receiver on

| LTE B38/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B38/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|---------------|----------------|------------------------------|------------------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|               |                |                              | 37775/2572.5           | 38000/2595 | 38225/2617.5 |                |                |                              | 37800/2575             | 38000/2595 | 38200/2615 |
| QPSK          | 1/0            | 18.50                        | 18.33                  | 18.09      | 18.12        | QPSK           | 1/0            | 18.50                        | 18.35                  | 18.41      | 18.27      |
|               | 1/12           | 18.50                        | 18.45                  | 18.22      | 18.25        |                | 1/24           | 18.50                        | 18.28                  | 18.25      | 18.28      |
|               | 1/24           | 18.50                        | 18.30                  | 18.04      | 18.11        |                | 1/49           | 18.50                        | 18.31                  | 18.35      | 18.35      |
|               | 12/0           | 18.50                        | 18.08                  | 17.98      | 17.90        |                | 25/0           | 18.50                        | 18.15                  | 18.02      | 17.97      |
|               | 12/6           | 18.50                        | 18.15                  | 18.02      | 17.94        |                | 25/12          | 18.50                        | 18.10                  | 17.96      | 17.98      |
|               | 12/13          | 18.50                        | 18.16                  | 17.98      | 17.94        |                | 25/25          | 18.50                        | 18.06                  | 17.98      | 18.00      |
|               | 25/0           | 18.50                        | 18.04                  | 17.90      | 17.93        |                | 50/0           | 18.50                        | 18.04                  | 17.98      | 18.02      |
| 16QAM         | 1/0            | 18.50                        | 17.98                  | 17.88      | 17.81        | 16QAM          | 1/0            | 18.50                        | 18.03                  | 18.14      | 17.89      |
|               | 1/12           | 18.50                        | 18.11                  | 18.01      | 17.92        |                | 1/24           | 18.50                        | 18.26                  | 18.34      | 18.20      |
|               | 1/24           | 18.50                        | 17.99                  | 17.84      | 17.78        |                | 1/49           | 18.50                        | 17.98                  | 18.07      | 17.90      |
|               | 12/0           | 18.50                        | 18.04                  | 17.94      | 17.91        |                | 25/0           | 18.50                        | 18.06                  | 18.00      | 17.97      |
|               | 12/6           | 18.50                        | 18.11                  | 18.02      | 17.95        |                | 25/12          | 18.50                        | 18.08                  | 17.97      | 17.97      |
|               | 12/13          | 18.50                        | 18.11                  | 17.99      | 17.96        |                | 25/25          | 18.50                        | 18.05                  | 17.93      | 17.99      |
|               | 25/0           | 18.50                        | 18.07                  | 17.91      | 17.92        |                | 50/0           | 18.50                        | 18.07                  | 17.94      | 17.98      |
| 64QAM         | 1/0            | 18.50                        | 18.16                  | 18.17      | 17.90        | 64QAM          | 1/0            | 18.50                        | 17.94                  | 18.37      | 18.13      |
|               | 1/12           | 18.50                        | 18.18                  | 18.29      | 18.04        |                | 1/24           | 18.50                        | 18.16                  | 18.22      | 18.40      |
|               | 1/24           | 18.50                        | 18.44                  | 18.11      | 17.89        |                | 1/49           | 18.50                        | 17.88                  | 18.41      | 18.15      |
|               | 12/0           | 18.50                        | 18.07                  | 17.92      | 17.90        |                | 25/0           | 18.50                        | 18.07                  | 18.00      | 17.88      |
|               | 12/6           | 18.50                        | 18.16                  | 17.93      | 17.93        |                | 25/12          | 18.50                        | 18.09                  | 17.93      | 17.90      |
|               | 12/13          | 18.50                        | 18.18                  | 17.89      | 17.94        |                | 25/25          | 18.50                        | 18.07                  | 17.92      | 17.89      |
|               | 25/0           | 18.50                        | 17.97                  | 17.83      | 17.95        |                | 50/0           | 18.50                        | 18.02                  | 17.93      | 17.93      |

| LTE B38/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B38/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |
|----------------|----------------|------------------------------|------------------------|------------|--------------|----------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|                |                |                              | 37825/2577.5           | 38000/2595 | 38175/2612.5 |                |                |                              | 37850/2580             | 38000/2595   | 38150/2610 |
| QPSK           | 1/0            | 18.50                        | 18.32                  | 18.34      | 18.14        | QPSK           | 1/0            | 18.50                        | 17.85                  | 17.86        | 17.79      |
|                | 1/37           | 18.50                        | 18.33                  | 18.41      | 18.25        |                | 1/50           | 18.50                        | 18.45                  | <b>18.46</b> | 18.39      |
|                | 1/74           | 18.50                        | 18.20                  | 18.27      | 18.13        |                | 1/99           | 18.50                        | 17.70                  | 17.74        | 17.71      |
|                | 36/0           | 18.50                        | 18.01                  | 18.00      | 17.94        |                | 50/0           | 18.50                        | 18.03                  | 17.99        | 17.93      |
|                | 36/19          | 18.50                        | 18.05                  | 18.00      | 17.95        |                | 50/25          | 18.50                        | <b>18.05</b>           | 17.97        | 17.94      |
|                | 36/39          | 18.50                        | 18.02                  | 17.91      | 17.94        |                | 50/50          | 18.50                        | 18.00                  | 17.89        | 17.91      |
|                | 75/0           | 18.50                        | 18.05                  | 17.99      | 17.93        |                | 100/0          | 18.50                        | 18.02                  | 17.93        | 17.92      |
| 16QAM          | 1/0            | 18.50                        | 17.96                  | 17.90      | 17.84        | 16QAM          | 1/0            | 18.50                        | 17.85                  | 17.86        | 17.79      |
|                | 1/37           | 18.50                        | 18.02                  | 18.08      | 17.96        |                | 1/50           | 18.50                        | 18.25                  | 18.42        | 18.19      |
|                | 1/74           | 18.50                        | 17.88                  | 18.04      | 17.83        |                | 1/99           | 18.50                        | 17.70                  | 17.74        | 17.71      |
|                | 36/0           | 18.50                        | 18.09                  | 18.03      | 17.97        |                | 50/0           | 18.50                        | 18.03                  | 17.99        | 17.93      |
|                | 36/19          | 18.50                        | 18.12                  | 18.04      | 17.96        |                | 50/25          | 18.50                        | 18.05                  | 17.97        | 17.94      |
|                | 36/39          | 18.50                        | 18.07                  | 17.95      | 17.97        |                | 50/50          | 18.50                        | 18.00                  | 17.89        | 17.91      |
|                | 75/0           | 18.50                        | 18.08                  | 17.98      | 17.94        |                | 100/0          | 18.50                        | 18.02                  | 17.93        | 17.92      |
| 64QAM          | 1/0            | 18.50                        | 17.79                  | 18.40      | 17.93        | 64QAM          | 1/0            | 18.50                        | 17.93                  | 18.13        | 18.21      |
|                | 1/37           | 18.50                        | 17.89                  | 18.45      | 18.04        |                | 1/50           | 18.50                        | 18.35                  | 18.36        | 18.23      |
|                | 1/74           | 18.50                        | 17.71                  | 18.31      | 17.93        |                | 1/99           | 18.50                        | 17.86                  | 18.03        | 18.19      |
|                | 36/0           | 18.50                        | 18.07                  | 18.03      | 17.87        |                | 50/0           | 18.50                        | 18.00                  | 18.02        | 17.92      |
|                | 36/19          | 18.50                        | 18.08                  | 18.03      | 17.88        |                | 50/25          | 18.50                        | 18.05                  | 17.98        | 17.92      |
|                | 36/39          | 18.50                        | 18.06                  | 17.98      | 17.90        |                | 50/50          | 18.50                        | 18.05                  | 17.93        | 17.93      |
|                | 75/0           | 18.50                        | 18.01                  | 17.98      | 17.93        |                | 100/0          | 18.50                        | 17.99                  | 17.98        | 17.88      |

Up Antenna Receiver off

| LTE B38/BW=5M |                | Average Conducted Power(dBm) |                        |            |              | LTE B38/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |
|---------------|----------------|------------------------------|------------------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |            |
|               |                |                              | 37775/2572.5           | 38000/2595 | 38225/2617.5 |                |                |                              | 37800/2575             | 38000/2595 | 38200/2615 |
| QPSK          | 1/0            | 20.00                        | 19.84                  | 19.46      | 19.23        | QPSK           | 1/0            | 20.00                        | 19.25                  | 19.79      | 19.48      |
|               | 1/12           | 20.00                        | 19.93                  | 19.55      | 19.35        |                | 1/24           | 20.00                        | 19.48                  | 19.81      | 19.71      |
|               | 1/24           | 20.00                        | 19.79                  | 19.41      | 19.21        |                | 1/49           | 20.00                        | 19.19                  | 19.70      | 19.46      |
|               | 12/0           | 20.00                        | 19.49                  | 19.17      | 19.19        |                | 25/0           | 20.00                        | 19.46                  | 19.35      | 19.19      |
|               | 12/6           | 20.00                        | 19.52                  | 19.20      | 19.29        |                | 25/12          | 20.00                        | 19.43                  | 19.22      | 19.22      |
|               | 12/13          | 20.00                        | 19.52                  | 19.17      | 19.28        |                | 25/25          | 20.00                        | 19.43                  | 19.24      | 19.20      |
|               | 25/0           | 20.00                        | 19.38                  | 19.11      | 19.24        |                | 50/0           | 20.00                        | 19.40                  | 19.27      | 19.25      |
| 16QAM         | 1/0            | 20.00                        | 19.70                  | 19.40      | 19.42        | 16QAM          | 1/0            | 20.00                        | 19.67                  | 19.71      | 19.61      |
|               | 1/12           | 20.00                        | 19.81                  | 19.58      | 19.56        |                | 1/24           | 20.00                        | 19.89                  | 19.92      | 19.87      |
|               | 1/24           | 20.00                        | 19.66                  | 19.34      | 19.42        |                | 1/49           | 20.00                        | 19.62                  | 19.66      | 19.61      |
|               | 12/0           | 20.00                        | 19.47                  | 19.36      | 19.21        |                | 25/0           | 20.00                        | 19.46                  | 19.36      | 19.28      |
|               | 12/6           | 20.00                        | 19.52                  | 19.32      | 19.25        |                | 25/12          | 20.00                        | 19.43                  | 19.25      | 19.32      |
|               | 12/13          | 20.00                        | 19.50                  | 19.32      | 19.25        |                | 25/25          | 20.00                        | 19.42                  | 19.29      | 19.30      |
|               | 25/0           | 20.00                        | 19.42                  | 19.24      | 19.25        |                | 50/0           | 20.00                        | 19.45                  | 19.29      | 19.32      |
| 64QAM         | 1/0            | 20.00                        | 19.36                  | 19.19      | 19.18        | 64QAM          | 1/0            | 20.00                        | 19.41                  | 19.46      | 19.26      |
|               | 1/12           | 20.00                        | 19.46                  | 19.31      | 19.27        |                | 1/24           | 20.00                        | 19.64                  | 19.66      | 19.54      |
|               | 1/24           | 20.00                        | 19.31                  | 19.15      | 19.16        |                | 1/49           | 20.00                        | 19.36                  | 19.36      | 19.24      |
|               | 12/0           | 20.00                        | 19.46                  | 19.30      | 19.28        |                | 25/0           | 20.00                        | 19.49                  | 19.39      | 19.30      |
|               | 12/6           | 20.00                        | 19.49                  | 19.32      | 19.27        |                | 25/12          | 20.00                        | 19.42                  | 19.31      | 19.29      |
|               | 12/13          | 20.00                        | 19.51                  | 19.28      | 19.38        |                | 25/25          | 20.00                        | 19.43                  | 19.31      | 19.28      |
|               | 25/0           | 20.00                        | 19.43                  | 19.28      | 19.30        |                | 50/0           | 20.00                        | 19.47                  | 19.31      | 19.29      |

| LTE B38/BW=15M |                | Average Conducted Power(dBm) |                        |            |              | LTE B38/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |
|----------------|----------------|------------------------------|------------------------|------------|--------------|----------------|----------------|------------------------------|------------------------|--------------|------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |            |              | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |            |
|                |                |                              | 37825/2577.5           | 38000/2595 | 38175/2612.5 |                |                |                              | 37850/2580             | 38000/2595   | 38150/2610 |
| QPSK           | 1/0            | 20.00                        | 19.15                  | 19.72      | 19.23        | QPSK           | 1/0            | 20.00                        | 19.56                  | 19.56        | 19.15      |
|                | 1/37           | 20.00                        | 19.21                  | 19.79      | 19.34        |                | 1/50           | 20.00                        | 19.94                  | <b>19.99</b> | 19.54      |
|                | 1/74           | 20.00                        | 19.03                  | 19.61      | 19.22        |                | 1/99           | 20.00                        | 19.42                  | 19.42        | 19.09      |
|                | 36/0           | 20.00                        | 19.49                  | 19.39      | 19.26        |                | 50/0           | 20.00                        | <b>19.43</b>           | 19.31        | 19.22      |
|                | 36/19          | 20.00                        | 19.48                  | 19.33      | 19.25        |                | 50/25          | 20.00                        | 19.42                  | 19.25        | 19.23      |
|                | 36/39          | 20.00                        | 19.45                  | 19.32      | 19.23        |                | 50/50          | 20.00                        | 19.37                  | 19.19        | 19.20      |
|                | 75/0           | 20.00                        | 19.42                  | 19.31      | 19.29        |                | 100/0          | 20.00                        | 19.40                  | 19.22        | 19.20      |
| 16QAM          | 1/0            | 20.00                        | 19.59                  | 19.65      | 19.47        | 16QAM          | 1/0            | 20.00                        | 19.48                  | 19.25        | 19.25      |
|                | 1/37           | 20.00                        | 19.64                  | 19.74      | 19.57        |                | 1/50           | 20.00                        | 19.86                  | 19.68        | 19.65      |
|                | 1/74           | 20.00                        | 19.46                  | 19.56      | 19.45        |                | 1/99           | 20.00                        | 19.37                  | 19.15        | 19.19      |
|                | 36/0           | 20.00                        | 19.45                  | 19.37      | 19.30        |                | 50/0           | 20.00                        | 19.35                  | 19.30        | 19.25      |
|                | 36/19          | 20.00                        | 19.44                  | 19.36      | 19.30        |                | 50/25          | 20.00                        | 19.37                  | 19.29        | 19.28      |
|                | 36/39          | 20.00                        | 19.42                  | 19.26      | 19.30        |                | 50/50          | 20.00                        | 19.29                  | 19.20        | 19.22      |
|                | 75/0           | 20.00                        | 19.46                  | 19.33      | 19.27        |                | 100/0          | 20.00                        | 19.34                  | 19.24        | 19.25      |
| 64QAM          | 1/0            | 20.00                        | 19.30                  | 19.37      | 19.21        | 64QAM          | 1/0            | 20.00                        | 19.20                  | 19.18        | 19.09      |
|                | 1/37           | 20.00                        | 19.37                  | 19.40      | 19.31        |                | 1/50           | 20.00                        | 19.62                  | 19.60        | 19.50      |
|                | 1/74           | 20.00                        | 19.20                  | 19.24      | 19.15        |                | 1/99           | 20.00                        | 19.07                  | 19.03        | 19.00      |
|                | 36/0           | 20.00                        | 19.52                  | 19.44      | 19.35        |                | 50/0           | 20.00                        | 19.40                  | 19.32        | 19.24      |
|                | 36/19          | 20.00                        | 19.50                  | 19.42      | 19.33        |                | 50/25          | 20.00                        | 19.43                  | 19.31        | 19.25      |
|                | 36/39          | 20.00                        | 19.48                  | 19.34      | 19.31        |                | 50/50          | 20.00                        | 19.35                  | 19.24        | 19.22      |
|                | 75/0           | 20.00                        | 19.53                  | 19.38      | 19.30        |                | 100/0          | 20.00                        | 19.39                  | 19.28        | 19.23      |

Note: The tested channels are marks in bold.

## 9. Conducted power measurement results of LTE B41

Down Antenna Receiver on

| LTE B41/BW=5M |                | Average Conducted Power(dBm) |                        |            |            |              | LTE B41/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |            |
|---------------|----------------|------------------------------|------------------------|------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              | Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |            |
|               |                |                              | 40065/2537.5           | 40440/2575 | 40840/2615 | 41215/2652.5 |                |                |                              | 40090/2540             | 40440/2575 | 40840/2615 | 41190/2650 |
| QPSK          | 1/0            | 23.50                        | 22.46                  | 22.63      | 22.61      | 22.36        | QPSK           | 1/0            | 23.50                        | 22.53                  | 22.71      | 22.71      | 22.51      |
|               | 1/12           | 23.50                        | 22.55                  | 22.76      | 22.75      | 22.50        |                | 1/24           | 23.50                        | 22.73                  | 22.89      | 22.92      | 22.78      |
|               | 1/24           | 23.50                        | 22.43                  | 22.66      | 22.62      | 22.37        |                | 1/49           | 23.50                        | 22.50                  | 22.73      | 22.75      | 22.48      |
|               | 12/0           | 22.50                        | 21.51                  | 21.77      | 21.72      | 21.51        |                | 25/0           | 22.50                        | 21.53                  | 21.87      | 21.82      | 21.65      |
|               | 12/6           | 22.50                        | 21.58                  | 21.83      | 21.82      | 21.53        |                | 25/12          | 22.50                        | 21.57                  | 21.89      | 21.83      | 21.59      |
|               | 12/13          | 22.50                        | 21.55                  | 21.82      | 21.78      | 21.55        |                | 25/25          | 22.50                        | 21.60                  | 21.87      | 21.83      | 21.61      |
|               | 25/0           | 22.50                        | 21.53                  | 21.79      | 21.77      | 21.55        |                | 50/0           | 22.50                        | 21.58                  | 21.89      | 21.81      | 21.67      |
| 16QAM         | 1/0            | 22.50                        | 21.74                  | 21.59      | 21.76      | 21.98        | 16QAM          | 1/0            | 22.50                        | 21.83                  | 21.70      | 21.83      | 21.83      |
|               | 1/12           | 22.50                        | 21.88                  | 21.72      | 21.86      | 22.10        |                | 1/24           | 22.50                        | 22.08                  | 21.89      | 22.02      | 22.06      |
|               | 1/24           | 22.50                        | 21.73                  | 21.61      | 21.74      | 21.95        |                | 1/49           | 22.50                        | 21.81                  | 21.75      | 21.87      | 21.76      |
|               | 12/0           | 21.50                        | 20.64                  | 20.84      | 20.82      | 20.70        |                | 25/0           | 21.50                        | 20.67                  | 20.94      | 20.88      | 20.83      |
|               | 12/6           | 21.50                        | 20.70                  | 20.93      | 20.91      | 20.73        |                | 25/12          | 21.50                        | 20.71                  | 20.95      | 20.88      | 20.78      |
|               | 12/13          | 21.50                        | 20.68                  | 20.88      | 20.87      | 20.74        |                | 25/25          | 21.50                        | 20.72                  | 20.94      | 20.89      | 20.76      |
|               | 25/0           | 21.50                        | 20.65                  | 20.88      | 20.81      | 20.75        |                | 50/0           | 21.50                        | 20.68                  | 20.94      | 20.92      | 20.81      |
| 64QAM         | 1/0            | 21.50                        | 20.80                  | 20.47      | 20.85      | 20.64        | 64QAM          | 1/0            | 21.50                        | 20.86                  | 20.42      | 20.81      | 20.81      |
|               | 1/12           | 21.50                        | 20.92                  | 20.63      | 20.97      | 20.76        |                | 1/24           | 21.50                        | 21.03                  | 20.61      | 20.97      | 21.10      |
|               | 1/24           | 21.50                        | 20.78                  | 20.51      | 20.84      | 20.62        |                | 1/49           | 21.50                        | 20.86                  | 20.46      | 20.84      | 20.75      |
|               | 12/0           | 20.50                        | 19.56                  | 19.67      | 19.56      | 19.65        |                | 25/0           | 20.50                        | 19.58                  | 19.84      | 19.68      | 19.83      |
|               | 12/6           | 20.50                        | 19.63                  | 19.78      | 19.64      | 19.67        |                | 25/12          | 20.50                        | 19.63                  | 19.81      | 19.66      | 19.74      |
|               | 12/13          | 20.50                        | 19.61                  | 19.73      | 19.60      | 19.67        |                | 25/25          | 20.50                        | 19.66                  | 19.81      | 19.67      | 19.75      |
|               | 25/0           | 20.50                        | 19.57                  | 19.77      | 19.57      | 19.65        |                | 50/0           | 20.50                        | 19.60                  | 19.81      | 19.72      | 19.72      |

| LTE B41/BW=15M |                | Average Conducted Power(dBm) |                        |            |            |              | LTE B41/BW=20M |                | Average Conducted Power(dBm) |                        |              |              |            |
|----------------|----------------|------------------------------|------------------------|------------|------------|--------------|----------------|----------------|------------------------------|------------------------|--------------|--------------|------------|
| Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              | Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |              |              |            |
|                |                |                              | 40115/2542.5           | 40440/2575 | 40840/2615 | 41165/2647.5 |                |                |                              | 40140/2545             | 40440/2575   | 40840/2615   | 41140/2645 |
| QPSK           | 1/0            | 23.50                        | 22.47                  | 22.64      | 22.67      | 22.50        | QPSK           | 1/0            | 23.50                        | 22.24                  | 22.50        | 22.55        | 22.34      |
|                | 1/37           | 23.50                        | 22.55                  | 22.76      | 22.80      | 22.59        |                | 1/50           | 23.50                        | 22.66                  | 22.88        | <b>22.93</b> | 22.75      |
|                | 1/74           | 23.50                        | 22.39                  | 22.65      | 22.68      | 22.37        |                | 1/99           | 23.50                        | 22.16                  | 22.57        | 22.54        | 22.18      |
|                | 36/0           | 22.50                        | 21.49                  | 21.79      | 21.79      | 21.56        |                | 50/0           | 22.50                        | 21.44                  | 21.79        | 21.74        | 21.66      |
|                | 36/19          | 22.50                        | 21.53                  | 21.87      | 21.84      | 21.58        |                | 50/25          | 22.50                        | 21.50                  | 21.86        | 21.82        | 21.69      |
|                | 36/39          | 22.50                        | 21.51                  | 21.83      | 21.84      | 21.50        |                | 50/50          | 22.50                        | 21.49                  | <b>21.88</b> | 21.77        | 21.59      |
|                | 75/0           | 22.50                        | 21.53                  | 21.82      | 21.84      | 21.58        |                | 100/0          | 22.50                        | 21.44                  | 21.81        | 21.75        | 21.61      |
| 16QAM          | 1/0            | 22.50                        | 21.79                  | 21.62      | 21.69      | 21.92        | 16QAM          | 1/0            | 22.50                        | 21.82                  | 21.44        | 21.61        | 21.72      |
|                | 1/37           | 22.50                        | 21.87                  | 21.78      | 21.84      | 21.97        |                | 1/50           | 22.50                        | 22.25                  | 21.85        | 21.98        | 22.09      |
|                | 1/74           | 22.50                        | 21.69                  | 21.70      | 21.66      | 21.78        |                | 1/99           | 22.50                        | 21.72                  | 21.57        | 21.59        | 21.52      |
|                | 36/0           | 21.50                        | 20.56                  | 20.85      | 20.79      | 20.69        |                | 50/0           | 21.50                        | 20.60                  | 20.82        | 20.83        | 20.83      |
|                | 36/19          | 21.50                        | 20.62                  | 20.83      | 20.83      | 20.70        |                | 50/25          | 21.50                        | 20.69                  | 20.93        | 20.91        | 20.84      |
|                | 36/39          | 21.50                        | 20.58                  | 20.88      | 20.86      | 20.64        |                | 50/50          | 21.50                        | 20.67                  | 20.92        | 20.84        | 20.75      |
|                | 75/0           | 21.50                        | 20.62                  | 20.91      | 20.84      | 20.69        |                | 100/0          | 21.50                        | 20.58                  | 20.88        | 20.81        | 20.79      |
| 64QAM          | 1/0            | 21.50                        | 20.80                  | 20.34      | 20.55      | 21.05        | 64QAM          | 1/0            | 21.50                        | 20.48                  | 20.92        | 20.58        | 20.56      |
|                | 1/37           | 21.50                        | 20.88                  | 20.47      | 20.67      | 21.09        |                | 1/50           | 21.50                        | 20.89                  | 21.31        | 20.94        | 20.95      |
|                | 1/74           | 21.50                        | 20.71                  | 20.40      | 20.54      | 20.89        |                | 1/99           | 21.50                        | 20.40                  | 21.09        | 20.58        | 20.39      |
|                | 36/0           | 20.50                        | 19.60                  | 19.83      | 19.68      | 19.72        |                | 50/0           | 20.50                        | 19.47                  | 19.75        | 19.68        | 19.75      |
|                | 36/19          | 20.50                        | 19.63                  | 19.84      | 19.72      | 19.71        |                | 50/25          | 20.50                        | 19.56                  | 19.82        | 19.75        | 19.78      |
|                | 36/39          | 20.50                        | 19.62                  | 19.86      | 19.72      | 19.65        |                | 50/50          | 20.50                        | 19.55                  | 19.83        | 19.70        | 19.70      |
|                | 75/0           | 20.50                        | 19.64                  | 19.75      | 19.76      | 19.68        |                | 100/0          | 20.50                        | 19.50                  | 19.72        | 19.69        | 19.71      |

Down Antenna Receiver off

| LTE B41/BW=5M |                | Average Conducted Power(dBm) |                        |            |            |              | LTE B41/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |            |
|---------------|----------------|------------------------------|------------------------|------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              | Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |            |
|               |                |                              | 40065/2537.5           | 40440/2575 | 40840/2615 | 41215/2652.5 |                |                |                              | 40090/2540             | 40440/2575 | 40840/2615 | 41190/2650 |
| QPSK          | 1/0            | 22.50                        | 21.38                  | 21.36      | 21.35      | 21.41        | QPSK           | 1/0            | 22.50                        | 21.40                  | 21.38      | 21.48      | 21.51      |
|               | 1/12           | 22.50                        | 21.48                  | 21.48      | 21.46      | 21.53        |                | 1/24           | 22.50                        | 21.65                  | 21.67      | 21.74      | 21.77      |
|               | 1/24           | 22.50                        | 21.33                  | 21.37      | 21.35      | 21.40        |                | 1/49           | 22.50                        | 21.35                  | 21.38      | 21.46      | 21.43      |
|               | 12/0           | 22.50                        | 21.45                  | 21.47      | 21.44      | 21.57        |                | 25/0           | 22.50                        | 21.46                  | 21.46      | 21.54      | 21.66      |
|               | 12/6           | 22.50                        | 21.52                  | 21.47      | 21.48      | 21.52        |                | 25/12          | 22.50                        | 21.47                  | 21.46      | 21.52      | 21.58      |
|               | 12/13          | 22.50                        | 21.51                  | 21.48      | 21.48      | 21.56        |                | 25/25          | 22.50                        | 21.50                  | 21.49      | 21.55      | 21.60      |
|               | 25/0           | 22.50                        | 21.46                  | 21.43      | 21.49      | 21.58        |                | 50/0           | 22.50                        | 21.47                  | 21.48      | 21.56      | 21.67      |
| 16QAM         | 1/0            | 22.50                        | 21.58                  | 21.57      | 21.72      | 21.70        | 16QAM          | 1/0            | 22.50                        | 21.75                  | 21.71      | 21.83      | 21.72      |
|               | 1/12           | 22.50                        | 21.69                  | 21.68      | 21.83      | 21.83        |                | 1/24           | 22.50                        | 21.75                  | 21.73      | 21.88      | 21.73      |
|               | 1/24           | 22.50                        | 21.76                  | 21.56      | 21.74      | 21.66        |                | 1/49           | 22.50                        | 21.70                  | 21.69      | 21.86      | 21.85      |
|               | 12/0           | 21.50                        | 20.60                  | 20.52      | 20.56      | 20.56        |                | 25/0           | 21.50                        | 20.55                  | 20.55      | 20.61      | 20.79      |
|               | 12/6           | 21.50                        | 20.65                  | 20.52      | 20.61      | 20.62        |                | 25/12          | 21.50                        | 20.58                  | 20.58      | 20.63      | 20.75      |
|               | 12/13          | 21.50                        | 20.65                  | 20.54      | 20.61      | 20.65        |                | 25/25          | 21.50                        | 20.60                  | 20.59      | 20.62      | 20.72      |
|               | 25/0           | 21.50                        | 20.54                  | 20.48      | 20.52      | 20.68        |                | 50/0           | 21.50                        | 20.58                  | 20.57      | 20.62      | 20.79      |
| 64QAM         | 1/0            | 21.50                        | 20.98                  | 20.47      | 20.69      | 20.58        | 64QAM          | 1/0            | 21.50                        | 20.37                  | 20.30      | 20.72      | 20.87      |
|               | 1/12           | 21.50                        | 20.87                  | 20.59      | 20.83      | 20.72        |                | 1/24           | 21.50                        | 20.58                  | 20.56      | 20.78      | 20.86      |
|               | 1/24           | 21.50                        | 20.95                  | 20.44      | 20.72      | 20.56        |                | 1/49           | 21.50                        | 20.30                  | 20.31      | 20.76      | 20.76      |
|               | 12/0           | 20.50                        | 19.50                  | 19.40      | 19.32      | 19.48        |                | 25/0           | 20.50                        | 19.43                  | 19.46      | 19.40      | 19.53      |
|               | 12/6           | 20.50                        | 19.56                  | 19.31      | 19.38      | 19.49        |                | 25/12          | 20.50                        | 19.51                  | 19.41      | 19.38      | 19.50      |
|               | 12/13          | 20.50                        | 19.57                  | 19.42      | 19.37      | 19.49        |                | 25/25          | 20.50                        | 19.50                  | 19.47      | 19.42      | 19.50      |
|               | 25/0           | 20.50                        | 19.35                  | 19.31      | 19.32      | 19.56        |                | 50/0           | 20.50                        | 19.42                  | 19.41      | 19.45      | 19.58      |

| LTE B41/BW=15M |                | Average Conducted Power(dBm) |                        |            |            |              | LTE B41/BW=20M |                | Average Conducted Power(dBm) |                        |            |            |              |
|----------------|----------------|------------------------------|------------------------|------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              | Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              |
|                |                |                              | 40115/2542.5           | 40440/2575 | 40840/2615 | 41165/2647.5 |                |                |                              | 40140/2545             | 40440/2575 | 40840/2615 | 41140/2645   |
| QPSK           | 1/0            | 22.50                        | 21.35                  | 21.32      | 21.42      | 21.52        | QPSK           | 1/0            | 22.50                        | 21.20                  | 21.19      | 21.25      | 21.43        |
|                | 1/37           | 22.50                        | 21.39                  | 21.41      | 21.54      | 21.59        |                | 1/50           | 22.50                        | 21.68                  | 21.70      | 21.79      | <b>21.90</b> |
|                | 1/74           | 22.50                        | 21.20                  | 21.27      | 21.39      | 21.39        |                | 1/99           | 22.50                        | 21.09                  | 21.18      | 21.29      | 21.29        |
|                | 36/0           | 22.50                        | 21.42                  | 21.48      | 21.50      | 21.60        |                | 50/0           | 22.50                        | 21.38                  | 21.42      | 21.50      | 21.69        |
|                | 36/19          | 22.50                        | 21.46                  | 21.52      | 21.51      | 21.58        |                | 50/25          | 22.50                        | 21.44                  | 21.49      | 21.54      | <b>21.72</b> |
|                | 36/39          | 22.50                        | 21.43                  | 21.52      | 21.53      | 21.53        |                | 50/50          | 22.50                        | 21.42                  | 21.42      | 21.55      | 21.60        |
|                | 75/0           | 22.50                        | 21.45                  | 21.50      | 21.52      | 21.61        |                | 100/0          | 22.50                        | 21.39                  | 21.43      | 21.49      | 21.64        |
| 16QAM          | 1/0            | 22.50                        | 21.67                  | 21.63      | 21.67      | 21.85        | 16QAM          | 1/0            | 22.50                        | 21.55                  | 21.51      | 21.53      | 21.60        |
|                | 1/37           | 22.50                        | 21.74                  | 21.71      | 21.80      | 21.68        |                | 1/50           | 22.50                        | 21.76                  | 21.78      | 21.87      | 21.83        |
|                | 1/74           | 22.50                        | 21.56                  | 21.58      | 21.70      | 21.69        |                | 1/99           | 22.50                        | 21.41                  | 21.46      | 21.64      | 21.43        |
|                | 36/0           | 21.50                        | 20.47                  | 20.50      | 20.52      | 20.64        |                | 50/0           | 21.50                        | 20.45                  | 20.50      | 20.54      | 20.79        |
|                | 36/19          | 21.50                        | 20.51                  | 20.53      | 20.54      | 20.63        |                | 50/25          | 21.50                        | 20.52                  | 20.53      | 20.59      | 20.79        |
|                | 36/39          | 21.50                        | 20.47                  | 20.52      | 20.55      | 20.56        |                | 50/50          | 21.50                        | 20.51                  | 20.48      | 20.60      | 20.72        |
|                | 75/0           | 21.50                        | 20.51                  | 20.55      | 20.51      | 20.65        |                | 100/0          | 21.50                        | 20.47                  | 20.49      | 20.54      | 20.76        |
| 64QAM          | 1/0            | 21.50                        | 20.28                  | 20.24      | 20.49      | 20.72        | 64QAM          | 1/0            | 21.50                        | 20.65                  | 20.74      | 20.54      | 20.58        |
|                | 1/37           | 21.50                        | 20.32                  | 20.32      | 20.64      | 20.76        |                | 1/50           | 21.50                        | 20.66                  | 20.77      | 20.64      | 20.61        |
|                | 1/74           | 21.50                        | 20.15                  | 20.18      | 20.55      | 20.54        |                | 1/99           | 21.50                        | 20.55                  | 20.70      | 20.69      | 20.45        |
|                | 36/0           | 20.50                        | 19.45                  | 19.42      | 19.42      | 19.54        |                | 50/0           | 20.50                        | 19.39                  | 19.39      | 19.47      | 19.67        |
|                | 36/19          | 20.50                        | 19.52                  | 19.57      | 19.43      | 19.54        |                | 50/25          | 20.50                        | 19.43                  | 19.40      | 19.50      | 19.67        |
|                | 36/39          | 20.50                        | 19.46                  | 19.50      | 19.46      | 19.46        |                | 50/50          | 20.50                        | 19.45                  | 19.37      | 19.50      | 19.58        |
|                | 75/0           | 20.50                        | 19.38                  | 19.44      | 19.48      | 19.60        |                | 100/0          | 20.50                        | 19.42                  | 19.35      | 19.46      | 19.63        |

Up Antenna Receiver on

| LTE B41/BW=5M |                | Average Conducted Power(dBm) |                        |            |            |              | LTE B41/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |            |
|---------------|----------------|------------------------------|------------------------|------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              | Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |            |
|               |                |                              | 40065/2537.5           | 40440/2575 | 40840/2615 | 41215/2652.5 |                |                |                              | 40090/2540             | 40440/2575 | 40840/2615 | 41190/2650 |
| QPSK          | 1/0            | 18.50                        | 17.97                  | 17.92      | 17.85      | 17.78        | QPSK           | 1/0            | 18.50                        | 18.02                  | 17.95      | 17.90      | 17.88      |
|               | 1/12           | 18.50                        | 18.07                  | 18.02      | 17.96      | 17.90        |                | 1/24           | 18.50                        | 18.26                  | 18.25      | 18.20      | 18.15      |
|               | 1/24           | 18.50                        | 17.93                  | 17.90      | 17.84      | 17.77        |                | 1/49           | 18.50                        | 17.98                  | 17.97      | 17.91      | 17.81      |
|               | 12/0           | 18.50                        | 18.02                  | 17.98      | 17.90      | 17.87        |                | 25/0           | 18.50                        | 18.02                  | 17.99      | 18.00      | 18.01      |
|               | 12/6           | 18.50                        | 18.10                  | 18.02      | 17.95      | 17.88        |                | 25/12          | 18.50                        | 18.10                  | 18.05      | 17.96      | 17.96      |
|               | 12/13          | 18.50                        | 18.08                  | 18.03      | 17.95      | 17.90        |                | 25/25          | 18.50                        | 18.09                  | 18.06      | 17.99      | 17.98      |
|               | 25/0           | 18.50                        | 18.03                  | 17.97      | 17.90      | 17.89        |                | 50/0           | 18.50                        | 18.05                  | 18.02      | 17.97      | 17.99      |
| 16QAM         | 1/0            | 18.50                        | 18.41                  | 18.22      | 18.23      | 18.14        | 16QAM          | 1/0            | 18.50                        | 18.38                  | 18.32      | 18.33      | 18.40      |
|               | 1/12           | 18.50                        | 18.26                  | 18.28      | 18.35      | 18.27        |                | 1/24           | 18.50                        | 18.36                  | 18.32      | 18.36      | 18.42      |
|               | 1/24           | 18.50                        | 18.38                  | 18.19      | 18.23      | 18.10        |                | 1/49           | 18.50                        | 18.34                  | 18.31      | 18.33      | 18.33      |
|               | 12/0           | 18.50                        | 18.16                  | 18.02      | 17.99      | 17.89        |                | 25/0           | 18.50                        | 18.14                  | 18.01      | 18.01      | 18.09      |
|               | 12/6           | 18.50                        | 18.17                  | 18.07      | 18.02      | 17.88        |                | 25/12          | 18.50                        | 18.11                  | 18.06      | 17.99      | 18.03      |
|               | 12/13          | 18.50                        | 18.14                  | 18.08      | 18.02      | 17.92        |                | 25/25          | 18.50                        | 18.11                  | 18.07      | 18.01      | 18.04      |
|               | 25/0           | 18.50                        | 18.03                  | 18.01      | 17.92      | 17.95        |                | 50/0           | 18.50                        | 18.12                  | 18.02      | 18.01      | 18.05      |
| 64QAM         | 1/0            | 18.50                        | 18.32                  | 18.04      | 18.16      | 17.96        | 64QAM          | 1/0            | 18.50                        | 17.95                  | 17.88      | 18.18      | 18.23      |
|               | 1/12           | 18.50                        | 18.41                  | 18.11      | 18.27      | 18.08        |                | 1/24           | 18.50                        | 18.18                  | 18.15      | 18.16      | 18.25      |
|               | 1/24           | 18.50                        | 18.28                  | 18.02      | 18.15      | 17.91        |                | 1/49           | 18.50                        | 17.93                  | 17.87      | 18.18      | 18.15      |
|               | 12/0           | 18.50                        | 18.19                  | 17.96      | 17.82      | 17.90        |                | 25/0           | 18.50                        | 18.16                  | 18.02      | 17.93      | 18.01      |
|               | 12/6           | 18.50                        | 18.18                  | 18.01      | 17.89      | 17.92        |                | 25/12          | 18.50                        | 18.14                  | 18.08      | 17.92      | 17.93      |
|               | 12/13          | 18.50                        | 18.16                  | 17.99      | 17.86      | 17.93        |                | 25/25          | 18.50                        | 18.15                  | 18.07      | 17.93      | 17.96      |
|               | 25/0           | 18.50                        | 17.97                  | 18.01      | 17.82      | 17.97        |                | 50/0           | 18.50                        | 18.05                  | 18.01      | 17.96      | 17.98      |

| LTE B41/BW=15M |                | Average Conducted Power(dBm) |                        |            |            |              | LTE B41/BW=20M |                | Average Conducted Power(dBm) |                        |            |            |            |
|----------------|----------------|------------------------------|------------------------|------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|------------|
| Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              | Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |            |
|                |                |                              | 40115/2542.5           | 40440/2575 | 40840/2615 | 41165/2647.5 |                |                |                              | 40140/2545             | 40440/2575 | 40840/2615 | 41140/2645 |
| QPSK           | 1/0            | 18.50                        | 18.14                  | 18.08      | 18.08      | 18.11        | QPSK           | 1/0            | 18.50                        | 18.25                  | 18.32      | 18.07      | 17.92      |
|                | 1/37           | 18.50                        | 18.21                  | 18.22      | 18.17      | 18.15        |                | 1/50           | 18.50                        | <b>18.44</b>           | 18.36      | 18.34      | 18.42      |
|                | 1/74           | 18.50                        | 18.03                  | 18.06      | 18.06      | 17.94        |                | 1/99           | 18.50                        | 18.12                  | 18.26      | 18.12      | 17.74      |
|                | 36/0           | 18.50                        | 18.05                  | 18.04      | 17.98      | 17.96        |                | 50/0           | 18.50                        | 18.02                  | 18.00      | 17.99      | 18.06      |
|                | 36/19          | 18.50                        | 18.12                  | 18.10      | 17.98      | 17.96        |                | 50/25          | 18.50                        | 18.08                  | 18.06      | 18.01      | 18.05      |
|                | 36/39          | 18.50                        | 18.07                  | 18.07      | 17.98      | 17.89        |                | 50/50          | 18.50                        | <b>18.07</b>           | 18.02      | 18.02      | 18.01      |
|                | 75/0           | 18.50                        | 18.08                  | 18.03      | 17.96      | 17.94        |                | 100/0          | 18.50                        | 18.03                  | 18.00      | 17.99      | 18.03      |
| 16QAM          | 1/0            | 18.50                        | 18.31                  | 18.23      | 18.18      | 18.26        | 16QAM          | 1/0            | 18.50                        | 18.16                  | 18.10      | 18.07      | 18.02      |
|                | 1/37           | 18.50                        | 18.39                  | 18.36      | 18.28      | 18.33        |                | 1/50           | 18.50                        | 18.38                  | 18.34      | 18.36      | 18.29      |
|                | 1/74           | 18.50                        | 18.21                  | 18.19      | 18.18      | 18.11        |                | 1/99           | 18.50                        | 18.06                  | 18.05      | 18.16      | 17.85      |
|                | 36/0           | 18.50                        | 18.05                  | 17.99      | 17.98      | 18.01        |                | 50/0           | 18.50                        | 17.97                  | 17.96      | 17.98      | 18.05      |
|                | 36/19          | 18.50                        | 18.08                  | 18.05      | 17.98      | 17.99        |                | 50/25          | 18.50                        | 18.01                  | 18.02      | 18.00      | 18.05      |
|                | 36/39          | 18.50                        | 18.02                  | 18.01      | 17.99      | 17.96        |                | 50/50          | 18.50                        | 18.01                  | 17.95      | 18.00      | 17.98      |
|                | 75/0           | 18.50                        | 18.06                  | 18.04      | 17.97      | 17.98        |                | 100/0          | 18.50                        | 17.98                  | 17.99      | 17.95      | 18.01      |
| 64QAM          | 1/0            | 18.50                        | 17.88                  | 17.79      | 17.97      | 18.07        | 64QAM          | 1/0            | 18.50                        | 17.84                  | 17.78      | 17.75      | 17.82      |
|                | 1/37           | 18.50                        | 17.95                  | 17.95      | 18.07      | 18.13        |                | 1/50           | 18.50                        | 18.31                  | 18.29      | 18.25      | 18.27      |
|                | 1/74           | 18.50                        | 17.77                  | 17.76      | 17.97      | 17.91        |                | 1/99           | 18.50                        | 17.73                  | 17.78      | 17.73      | 17.65      |
|                | 36/0           | 18.50                        | 18.10                  | 18.06      | 17.93      | 17.95        |                | 50/0           | 18.50                        | 17.99                  | 18.01      | 17.97      | 18.02      |
|                | 36/19          | 18.50                        | 18.17                  | 18.08      | 17.91      | 17.94        |                | 50/25          | 18.50                        | 18.06                  | 18.05      | 17.97      | 18.01      |
|                | 36/39          | 18.50                        | 18.10                  | 18.06      | 17.93      | 17.89        |                | 50/50          | 18.50                        | 18.06                  | 18.02      | 17.97      | 17.97      |
|                | 75/0           | 18.50                        | 18.03                  | 18.02      | 17.97      | 18.00        |                | 100/0          | 18.50                        | 18.00                  | 18.03      | 17.95      | 17.99      |

Up Antenna Receiver off

| LTE B41/BW=5M |                | Average Conducted Power(dBm) |                        |            |            |              | LTE B41/BW=10M |                | Average Conducted Power(dBm) |                        |            |            |            |
|---------------|----------------|------------------------------|------------------------|------------|------------|--------------|----------------|----------------|------------------------------|------------------------|------------|------------|------------|
| Modulation    | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              | Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |            |
|               |                |                              | 40065/2537.5           | 40440/2575 | 40840/2615 | 41215/2652.5 |                |                |                              | 40090/2540             | 40440/2575 | 40840/2615 | 41190/2650 |
| QPSK          | 1/0            | 20.00                        | 19.34                  | 19.30      | 19.14      | 18.99        | QPSK           | 1/0            | 20.00                        | 19.41                  | 19.35      | 19.26      | 19.16      |
|               | 1/12           | 20.00                        | 19.44                  | 19.41      | 19.25      | 19.11        |                | 1/24           | 20.00                        | 19.59                  | 19.60      | 19.47      | 19.38      |
|               | 1/24           | 20.00                        | 19.28                  | 19.30      | 19.13      | 18.97        |                | 1/49           | 20.00                        | 19.33                  | 19.37      | 19.22      | 19.05      |
|               | 12/0           | 20.00                        | 19.34                  | 19.35      | 19.22      | 19.07        |                | 25/0           | 20.00                        | 19.36                  | 19.38      | 19.29      | 19.19      |
|               | 12/6           | 20.00                        | 19.44                  | 19.39      | 19.26      | 19.09        |                | 25/12          | 20.00                        | 19.39                  | 19.38      | 19.27      | 19.13      |
|               | 12/13          | 20.00                        | 19.40                  | 19.39      | 19.25      | 19.11        |                | 25/25          | 20.00                        | 19.40                  | 19.41      | 19.24      | 19.13      |
|               | 25/0           | 20.00                        | 19.35                  | 19.33      | 19.20      | 19.09        |                | 50/0           | 20.00                        | 19.38                  | 19.38      | 19.26      | 19.18      |
| 16QAM         | 1/0            | 20.00                        | 19.55                  | 19.55      | 19.38      | 19.54        | 16QAM          | 1/0            | 20.00                        | 19.65                  | 19.57      | 19.47      | 19.42      |
|               | 1/12           | 20.00                        | 19.68                  | 19.64      | 19.50      | 19.63        |                | 1/24           | 20.00                        | 19.63                  | 19.61      | 19.50      | 19.43      |
|               | 1/24           | 20.00                        | 19.50                  | 19.54      | 19.36      | 19.49        |                | 1/49           | 20.00                        | 19.57                  | 19.58      | 19.44      | 19.31      |
|               | 12/0           | 20.00                        | 19.36                  | 19.34      | 19.21      | 19.16        |                | 25/0           | 20.00                        | 19.37                  | 19.36      | 19.31      | 19.27      |
|               | 12/6           | 20.00                        | 19.43                  | 19.37      | 19.25      | 19.19        |                | 25/12          | 20.00                        | 19.39                  | 19.38      | 19.30      | 19.19      |
|               | 12/13          | 20.00                        | 19.41                  | 19.38      | 19.26      | 19.18        |                | 25/25          | 20.00                        | 19.41                  | 19.39      | 19.28      | 19.21      |
|               | 25/0           | 20.00                        | 19.36                  | 19.34      | 19.21      | 19.18        |                | 50/0           | 20.00                        | 19.38                  | 19.35      | 19.28      | 19.23      |
| 64QAM         | 1/0            | 20.00                        | 19.49                  | 19.69      | 19.34      | 19.14        | 64QAM          | 1/0            | 20.00                        | 19.60                  | 19.51      | 19.32      | 19.28      |
|               | 1/12           | 20.00                        | 19.60                  | 19.48      | 19.46      | 19.26        |                | 1/24           | 20.00                        | 19.48                  | 19.73      | 19.52      | 19.46      |
|               | 1/24           | 20.00                        | 19.48                  | 19.68      | 19.31      | 19.08        |                | 1/49           | 20.00                        | 19.50                  | 19.52      | 19.27      | 19.15      |
|               | 12/0           | 20.00                        | 19.38                  | 19.19      | 19.20      | 19.13        |                | 25/0           | 20.00                        | 19.37                  | 19.38      | 19.33      | 19.29      |
|               | 12/6           | 20.00                        | 19.44                  | 19.22      | 19.25      | 19.19        |                | 25/12          | 20.00                        | 19.41                  | 19.39      | 19.30      | 19.23      |
|               | 12/13          | 20.00                        | 19.42                  | 19.25      | 19.25      | 19.16        |                | 25/25          | 20.00                        | 19.43                  | 19.40      | 19.28      | 19.23      |
|               | 25/0           | 20.00                        | 19.39                  | 19.27      | 19.23      | 19.15        |                | 50/0           | 20.00                        | 19.39                  | 19.36      | 19.24      | 19.21      |

| LTE B41/BW=15M |                | Average Conducted Power(dBm) |                        |            |            |              | LTE B41/BW=20M |                | Average Conducted Power(dBm) |                        |              |            |            |
|----------------|----------------|------------------------------|------------------------|------------|------------|--------------|----------------|----------------|------------------------------|------------------------|--------------|------------|------------|
| Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |            |            |              | Modulation     | RB Size/Offset | Max. Tune up                 | Channel/Frequency(MHz) |              |            |            |
|                |                |                              | 40115/2542.5           | 40440/2575 | 40840/2615 | 41165/2647.5 |                |                |                              | 40140/2545             | 40440/2575   | 40840/2615 | 41140/2645 |
| QPSK           | 1/0            | 20.00                        | 19.33                  | 19.32      | 19.22      | 19.16        | QPSK           | 1/0            | 20.00                        | 19.35                  | 19.34        | 19.17      | 19.18      |
|                | 1/37           | 20.00                        | 19.40                  | 19.40      | 19.29      | 19.20        |                | 1/50           | 20.00                        | 19.65                  | <b>19.75</b> | 19.63      | 19.58      |
|                | 1/74           | 20.00                        | 19.19                  | 19.26      | 19.15      | 18.95        |                | 1/99           | 20.00                        | 19.20                  | 19.29        | 19.14      | 18.95      |
|                | 36/0           | 20.00                        | 19.38                  | 19.43      | 19.33      | 19.15        |                | 50/0           | 20.00                        | 19.28                  | 19.35        | 19.23      | 19.24      |
|                | 36/19          | 20.00                        | 19.41                  | 19.45      | 19.29      | 19.17        |                | 50/25          | 20.00                        | 19.33                  | <b>19.39</b> | 19.25      | 19.22      |
|                | 36/39          | 20.00                        | 19.37                  | 19.45      | 19.29      | 19.08        |                | 50/50          | 20.00                        | 19.34                  | 19.35        | 19.20      | 19.12      |
|                | 75/0           | 20.00                        | 19.39                  | 19.43      | 19.28      | 19.14        |                | 100/0          | 20.00                        | 19.30                  | 19.36        | 19.21      | 19.16      |
| 16QAM          | 1/0            | 20.00                        | 19.58                  | 19.50      | 19.42      | 19.51        | 16QAM          | 1/0            | 20.00                        | 19.62                  | 19.59        | 19.19      | 19.26      |
|                | 1/37           | 20.00                        | 19.63                  | 19.62      | 19.55      | 19.54        |                | 1/50           | 20.00                        | 19.63                  | 19.61        | 19.63      | 19.65      |
|                | 1/74           | 20.00                        | 19.42                  | 19.43      | 19.40      | 19.24        |                | 1/99           | 20.00                        | 19.48                  | 19.53        | 19.18      | 19.05      |
|                | 36/0           | 20.00                        | 19.35                  | 19.38      | 19.26      | 19.19        |                | 50/0           | 20.00                        | 19.30                  | 19.36        | 19.23      | 19.28      |
|                | 36/19          | 20.00                        | 19.40                  | 19.40      | 19.31      | 19.19        |                | 50/25          | 20.00                        | 19.40                  | 19.39        | 19.23      | 19.27      |
|                | 36/39          | 20.00                        | 19.37                  | 19.40      | 19.27      | 19.13        |                | 50/50          | 20.00                        | 19.38                  | 19.38        | 19.21      | 19.18      |
|                | 75/0           | 20.00                        | 19.39                  | 19.40      | 19.24      | 19.17        |                | 100/0          | 20.00                        | 19.31                  | 19.34        | 19.22      | 19.23      |
| 64QAM          | 1/0            | 20.00                        | 19.54                  | 19.48      | 19.56      | 19.57        | 64QAM          | 1/0            | 20.00                        | 19.20                  | 19.17        | 19.00      | 18.95      |
|                | 1/37           | 20.00                        | 19.55                  | 19.55      | 19.55      | 19.57        |                | 1/50           | 20.00                        | 19.63                  | 19.60        | 19.46      | 19.38      |
|                | 1/74           | 20.00                        | 19.39                  | 19.37      | 19.40      | 19.25        |                | 1/99           | 20.00                        | 19.06                  | 19.12        | 19.02      | 18.68      |
|                | 36/0           | 20.00                        | 19.37                  | 19.38      | 19.26      | 19.20        |                | 50/0           | 20.00                        | 19.29                  | 19.32        | 19.25      | 19.25      |
|                | 36/19          | 20.00                        | 19.40                  | 19.40      | 19.28      | 19.20        |                | 50/25          | 20.00                        | 19.34                  | 19.35        | 19.24      | 19.26      |
|                | 36/39          | 20.00                        | 19.36                  | 19.41      | 19.28      | 19.14        |                | 50/50          | 20.00                        | 19.36                  | 19.33        | 19.22      | 19.17      |
|                | 75/0           | 20.00                        | 19.40                  | 19.40      | 19.22      | 19.16        |                | 100/0          | 20.00                        | 19.29                  | 19.31        | 19.19      | 19.24      |

Note: The tested channels are marks in bold.

## 10. Conducted power measurement results of LTE B66

Down Antenna\_Receiver on

| LTE B66/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=3M |                | Average Conducted Power(dBm) |                        |             |               |
|-----------------|----------------|------------------------------|------------------------|-------------|---------------|---------------|----------------|------------------------------|------------------------|-------------|---------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               |
|                 |                |                              | 131979/1710.7          | 132272/1740 | 132565/1769.3 |               |                |                              | 131987/1711.5          | 132272/1740 | 132557/1768.5 |
| QPSK            | 1/0            | 24.00                        | 22.85                  | 22.81       | 22.81         | QPSK          | 1/0            | 24.00                        | 22.74                  | 22.89       | 22.74         |
|                 | 1/2            | 24.00                        | 22.98                  | 22.93       | 22.92         |               | 1/7            | 24.00                        | 22.95                  | 23.03       | 22.89         |
|                 | 1/5            | 24.00                        | 22.84                  | 22.82       | 22.81         |               | 1/14           | 24.00                        | 22.86                  | 22.92       | 22.76         |
|                 | 3/0            | 24.00                        | 22.88                  | 22.87       | 22.88         |               | 8/0            | 23.00                        | 21.91                  | 21.98       | 21.87         |
|                 | 3/1            | 24.00                        | 22.93                  | 22.97       | 22.93         |               | 8/3            | 23.00                        | 21.92                  | 21.98       | 21.91         |
|                 | 3/3            | 24.00                        | 22.90                  | 22.96       | 22.92         |               | 8/7            | 23.00                        | 21.89                  | 21.94       | 21.88         |
|                 | 6/0            | 23.00                        | 21.84                  | 21.89       | 21.85         |               | 15/0           | 23.00                        | 21.89                  | 21.94       | 21.90         |
| 16QAM           | 1/0            | 23.00                        | 21.78                  | 21.91       | 22.19         | 16QAM         | 1/0            | 23.00                        | 21.77                  | 22.28       | 21.91         |
|                 | 1/2            | 23.00                        | 21.85                  | 22.04       | 22.27         |               | 1/7            | 23.00                        | 21.91                  | 22.42       | 22.06         |
|                 | 1/5            | 23.00                        | 21.80                  | 21.96       | 22.16         |               | 1/14           | 23.00                        | 21.78                  | 22.29       | 21.89         |
|                 | 3/0            | 23.00                        | 22.00                  | 21.96       | 22.09         |               | 8/0            | 22.00                        | 20.95                  | 21.02       | 20.93         |
|                 | 3/1            | 23.00                        | 22.02                  | 21.98       | 22.12         |               | 8/3            | 22.00                        | 21.01                  | 21.04       | 20.97         |
|                 | 3/3            | 23.00                        | 22.03                  | 21.94       | 22.11         |               | 8/7            | 22.00                        | 20.97                  | 21.00       | 20.94         |
|                 | 6/0            | 22.00                        | 20.97                  | 21.03       | 20.75         |               | 15/0           | 22.00                        | 20.90                  | 20.96       | 20.89         |
| 64QAM           | 1/0            | 22.00                        | 20.91                  | 21.23       | 20.95         | 64QAM         | 1/0            | 22.00                        | 21.15                  | 21.03       | 21.06         |
|                 | 1/2            | 22.00                        | 21.00                  | 21.38       | 21.09         |               | 1/7            | 22.00                        | 21.31                  | 21.19       | 21.22         |
|                 | 1/5            | 22.00                        | 20.92                  | 21.22       | 20.95         |               | 1/14           | 22.00                        | 21.20                  | 21.11       | 21.06         |
|                 | 3/0            | 22.00                        | 20.81                  | 21.24       | 21.03         |               | 8/0            | 21.00                        | 19.95                  | 19.98       | 19.84         |
|                 | 3/1            | 22.00                        | 20.84                  | 21.27       | 21.07         |               | 8/3            | 21.00                        | 19.98                  | 20.04       | 19.88         |
|                 | 3/3            | 22.00                        | 20.83                  | 21.23       | 21.06         |               | 8/7            | 21.00                        | 19.93                  | 20.00       | 19.83         |
|                 | 6/0            | 21.00                        | 19.90                  | 19.88       | 20.15         |               | 15/0           | 21.00                        | 19.89                  | 19.97       | 19.93         |

| LTE B66/BW=5M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=10M |                | Average Conducted Power(dBm) |                        |             |             |
|---------------|----------------|------------------------------|------------------------|-------------|---------------|----------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|               |                |                              | 131997/1712.5          | 132272/1740 | 132547/1767.5 |                |                |                              | 132022/1715            | 132272/1740 | 132522/1765 |
| QPSK          | 1/0            | 24.00                        | 22.93                  | 22.89       | 22.84         | QPSK           | 1/0            | 24.00                        | 22.83                  | 22.97       | 22.84       |
|               | 1/12           | 24.00                        | 23.06                  | 22.98       | 22.99         |                | 1/24           | 24.00                        | 23.08                  | 23.13       | 22.99       |
|               | 1/24           | 24.00                        | 22.96                  | 22.89       | 22.88         |                | 1/49           | 24.00                        | 22.96                  | 22.96       | 22.91       |
|               | 12/0           | 23.00                        | 21.85                  | 21.92       | 21.94         |                | 25/0           | 23.00                        | 21.90                  | 21.99       | 21.96       |
|               | 12/6           | 23.00                        | 21.92                  | 21.98       | 21.95         |                | 25/12          | 23.00                        | 21.96                  | 21.98       | 21.96       |
|               | 12/13          | 23.00                        | 21.95                  | 21.98       | 21.96         |                | 25/25          | 23.00                        | 21.99                  | 21.97       | 21.92       |
|               | 25/0           | 23.00                        | 21.88                  | 21.91       | 21.92         |                | 50/0           | 23.00                        | 21.95                  | 22.01       | 21.97       |
| 16QAM         | 1/0            | 23.00                        | 21.94                  | 22.33       | 21.92         | 16QAM          | 1/0            | 23.00                        | 21.75                  | 22.24       | 21.91       |
|               | 1/12           | 23.00                        | 22.07                  | 22.44       | 22.05         |                | 1/24           | 23.00                        | 21.99                  | 22.44       | 22.05       |
|               | 1/24           | 23.00                        | 21.99                  | 22.38       | 21.93         |                | 1/49           | 23.00                        | 21.81                  | 22.28       | 21.93       |
|               | 12/0           | 22.00                        | 20.91                  | 21.06       | 20.97         |                | 25/0           | 22.00                        | 20.91                  | 21.05       | 21.07       |
|               | 12/6           | 22.00                        | 20.99                  | 21.09       | 21.01         |                | 25/12          | 22.00                        | 20.98                  | 21.06       | 21.08       |
|               | 12/13          | 22.00                        | 21.00                  | 21.10       | 21.01         |                | 25/25          | 22.00                        | 21.02                  | 21.02       | 21.05       |
|               | 25/0           | 22.00                        | 20.91                  | 21.02       | 20.91         |                | 50/0           | 22.00                        | 20.96                  | 21.05       | 21.06       |
| 64QAM         | 1/0            | 22.00                        | 20.74                  | 21.14       | 21.04         | 64QAM          | 1/0            | 22.00                        | 21.13                  | 20.99       | 21.03       |
|               | 1/12           | 22.00                        | 20.89                  | 21.28       | 21.14         |                | 1/24           | 22.00                        | 21.37                  | 21.22       | 21.22       |
|               | 1/24           | 22.00                        | 20.78                  | 21.20       | 21.07         |                | 1/49           | 22.00                        | 21.22                  | 21.08       | 21.05       |
|               | 12/0           | 21.00                        | 19.92                  | 19.86       | 19.98         |                | 25/0           | 21.00                        | 19.94                  | 20.07       | 20.02       |
|               | 12/6           | 21.00                        | 19.96                  | 19.91       | 19.96         |                | 25/12          | 21.00                        | 20.00                  | 20.02       | 20.02       |
|               | 12/13          | 21.00                        | 19.98                  | 19.90       | 20.00         |                | 25/25          | 21.00                        | 20.04                  | 20.05       | 20.00       |
|               | 25/0           | 21.00                        | 19.85                  | 19.89       | 19.92         |                | 50/0           | 21.00                        | 19.98                  | 20.04       | 19.96       |

| LTE B66/BW=15M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=20M |                | Average Conducted Power(dBm) |                        |              |             |
|----------------|----------------|------------------------------|------------------------|-------------|---------------|----------------|----------------|------------------------------|------------------------|--------------|-------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |             |
|                |                |                              | 132047/1717.5          | 132272/1740 | 132497/1762.5 |                |                |                              | 132072/1720            | 132272/1740  | 132472/1760 |
| QPSK           | 1/0            | 24.00                        | 22.80                  | 22.89       | 22.76         | QPSK           | 1/0            | 24.00                        | 22.73                  | 22.80        | 22.69       |
|                | 1/37           | 24.00                        | 22.97                  | 23.02       | 22.97         |                | 1/50           | 24.00                        | <b>23.17</b>           | 23.04        | 23.15       |
|                | 1/74           | 24.00                        | 22.89                  | 22.85       | 22.83         |                | 1/99           | 24.00                        | 22.88                  | 22.77        | 22.75       |
|                | 36/0           | 23.00                        | 21.92                  | 22.85       | 21.88         |                | 50/0           | 23.00                        | 21.85                  | 21.97        | 21.88       |
|                | 36/19          | 23.00                        | 22.02                  | 22.05       | 21.96         |                | 50/25          | 23.00                        | 21.93                  | <b>22.00</b> | 21.96       |
|                | 36/39          | 23.00                        | 22.08                  | 21.99       | 21.94         |                | 50/50          | 23.00                        | 21.94                  | 21.94        | 21.91       |
|                | 75/0           | 23.00                        | 21.99                  | 22.02       | 21.94         |                | 100/0          | 23.00                        | 21.88                  | 21.98        | 21.90       |
| 16QAM          | 1/0            | 23.00                        | 21.67                  | 22.16       | 22.20         | 16QAM          | 1/0            | 23.00                        | 22.10                  | 22.10        | 22.07       |
|                | 1/37           | 23.00                        | 21.86                  | 22.32       | 22.37         |                | 1/50           | 23.00                        | 22.56                  | 22.48        | 22.46       |
|                | 1/74           | 23.00                        | 21.78                  | 22.18       | 22.22         |                | 1/99           | 23.00                        | 22.24                  | 22.16        | 22.08       |
|                | 36/0           | 22.00                        | 20.89                  | 20.88       | 20.88         |                | 50/0           | 22.00                        | 20.93                  | 21.00        | 20.87       |
|                | 36/19          | 22.00                        | 20.96                  | 21.06       | 20.93         |                | 50/25          | 22.00                        | 21.00                  | 21.03        | 20.98       |
|                | 36/39          | 22.00                        | 21.01                  | 21.04       | 20.89         |                | 50/50          | 22.00                        | 20.98                  | 20.97        | 20.94       |
|                | 75/0           | 22.00                        | 20.98                  | 21.01       | 20.93         |                | 100/0          | 22.00                        | 20.97                  | 20.99        | 20.95       |
| 64QAM          | 1/0            | 22.00                        | 21.05                  | 20.92       | 21.35         | 64QAM          | 1/0            | 22.00                        | 20.92                  | 21.27        | 20.92       |
|                | 1/37           | 22.00                        | 21.25                  | 21.07       | 21.52         |                | 1/50           | 22.00                        | 21.37                  | 21.00        | 21.38       |
|                | 1/74           | 22.00                        | 21.16                  | 21.00       | 21.43         |                | 1/99           | 22.00                        | 21.06                  | 21.29        | 21.00       |
|                | 36/0           | 21.00                        | 19.97                  | 21.00       | 19.90         |                | 50/0           | 21.00                        | 19.95                  | 19.99        | 19.92       |
|                | 36/19          | 21.00                        | 20.02                  | 20.07       | 19.96         |                | 50/25          | 21.00                        | 20.02                  | 20.00        | 20.01       |
|                | 36/39          | 21.00                        | 20.06                  | 20.05       | 19.97         |                | 50/50          | 21.00                        | 20.00                  | 19.97        | 19.98       |
|                | 75/0           | 21.00                        | 20.02                  | 20.03       | 20.00         |                | 100/0          | 21.00                        | 19.95                  | 19.97        | 19.96       |

Down Antenna Receiver off

| LTE B66/BW=1.4M |                       |                 | Average Conducted Power(dBm) |                 |                   | LTE B66/BW=3M   |                       |                 | Average Conducted Power(dBm) |                 |                   |
|-----------------|-----------------------|-----------------|------------------------------|-----------------|-------------------|-----------------|-----------------------|-----------------|------------------------------|-----------------|-------------------|
| Modula<br>-tion | RB<br>Size/<br>Offset | Max.<br>Tune-up | Channel/Frequency(MHz)       |                 |                   | Modula<br>-tion | RB<br>Size/<br>Offset | Max.<br>Tune-up | Channel/Frequency(MHz)       |                 |                   |
|                 |                       |                 | 131979/<br>1710.7            | 132272/<br>1740 | 132565/<br>1769.3 |                 |                       |                 | 131987/<br>1711.5            | 132272/<br>1740 | 132557/<br>1768.5 |
| QPSK            | 1/0                   | 21.00           | 20.47                        | 20.60           | 20.39             | QPSK            | 1/0                   | 21.00           | 20.72                        | 20.42           | 20.61             |
|                 | 1/2                   | 21.00           | 20.63                        | 20.63           | 20.54             |                 | 1/7                   | 21.00           | 20.66                        | 20.60           | 20.74             |
|                 | 1/5                   | 21.00           | 20.51                        | 20.62           | 20.39             |                 | 1/14                  | 21.00           | 20.79                        | 20.46           | 20.60             |
|                 | 3/0                   | 21.00           | 20.39                        | 20.69           | 20.38             |                 | 8/0                   | 21.00           | 20.40                        | 20.47           | 20.52             |
|                 | 3/1                   | 21.00           | 20.43                        | 20.73           | 20.42             |                 | 8/3                   | 21.00           | 20.47                        | 20.51           | 20.53             |
|                 | 3/3                   | 21.00           | 20.34                        | 20.69           | 20.36             |                 | 8/7                   | 21.00           | 20.43                        | 20.49           | 20.52             |
|                 | 6/0                   | 21.00           | 20.42                        | 20.42           | 20.44             |                 | 15/0                  | 21.00           | 20.44                        | 20.42           | 20.42             |
| 16QAM           | 1/0                   | 21.00           | 20.56                        | 20.59           | 20.58             | 16QAM           | 1/0                   | 21.00           | 20.64                        | 20.67           | 20.65             |
|                 | 1/2                   | 21.00           | 20.71                        | 20.77           | 20.78             |                 | 1/7                   | 21.00           | 20.59                        | 20.58           | 20.65             |
|                 | 1/5                   | 21.00           | 20.56                        | 20.61           | 20.62             |                 | 1/14                  | 21.00           | 20.69                        | 20.67           | 20.69             |
|                 | 3/0                   | 21.00           | 20.56                        | 20.45           | 20.44             |                 | 8/0                   | 21.00           | 20.34                        | 20.50           | 20.46             |
|                 | 3/1                   | 21.00           | 20.59                        | 20.48           | 20.48             |                 | 8/3                   | 21.00           | 20.39                        | 20.53           | 20.46             |
|                 | 3/3                   | 21.00           | 20.51                        | 20.43           | 20.42             |                 | 8/7                   | 21.00           | 20.37                        | 20.53           | 20.43             |
|                 | 6/0                   | 21.00           | 20.40                        | 20.49           | 20.49             |                 | 15/0                  | 21.00           | 20.39                        | 20.46           | 20.45             |
| 64QAM           | 1/0                   | 21.00           | 20.29                        | 20.39           | 20.30             | 64QAM           | 1/0                   | 21.00           | 20.36                        | 20.44           | 20.39             |
|                 | 1/2                   | 21.00           | 20.48                        | 20.51           | 20.49             |                 | 1/7                   | 21.00           | 20.63                        | 20.76           | 20.67             |
|                 | 1/5                   | 21.00           | 20.32                        | 20.38           | 20.35             |                 | 1/14                  | 21.00           | 20.39                        | 20.44           | 20.44             |
|                 | 3/0                   | 21.00           | 20.38                        | 20.42           | 20.38             |                 | 8/0                   | 21.00           | 20.38                        | 20.47           | 20.42             |
|                 | 3/1                   | 21.00           | 20.44                        | 20.49           | 20.43             |                 | 8/3                   | 21.00           | 20.44                        | 20.48           | 20.42             |
|                 | 3/3                   | 21.00           | 20.39                        | 20.43           | 20.38             |                 | 8/7                   | 21.00           | 20.41                        | 20.46           | 20.42             |
|                 | 6/0                   | 21.00           | 20.35                        | 20.42           | 20.37             |                 | 15/0                  | 21.00           | 20.38                        | 20.41           | 20.43             |

| LTE B66/BW=5M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=10M |                | Average Conducted Power(dBm) |                        |             |             |
|---------------|----------------|------------------------------|------------------------|-------------|---------------|----------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|               |                |                              | 131997/1712.5          | 132272/1740 | 132547/1767.5 |                |                |                              | 132022/1715            | 132272/1740 | 132522/1765 |
| QPSK          | 1/0            | 21.00                        | 20.64                  | 20.58       | 20.61         | QPSK           | 1/0            | 21.00                        | 20.70                  | 20.41       | 20.63       |
|               | 1/12           | 21.00                        | 20.77                  | 20.66       | 20.66         |                | 1/24           | 21.00                        | 20.80                  | 20.47       | 20.68       |
|               | 1/24           | 21.00                        | 20.71                  | 20.58       | 20.65         |                | 1/49           | 21.00                        | 20.76                  | 20.47       | 20.64       |
|               | 12/0           | 21.00                        | 20.34                  | 20.40       | 20.45         |                | 25/0           | 21.00                        | 20.42                  | 20.59       | 20.56       |
|               | 12/6           | 21.00                        | 20.41                  | 20.45       | 20.47         |                | 25/12          | 21.00                        | 20.47                  | 20.56       | 20.54       |
|               | 12/13          | 21.00                        | 20.41                  | 20.42       | 20.48         |                | 25/25          | 21.00                        | 20.52                  | 20.56       | 20.55       |
|               | 25/0           | 21.00                        | 20.45                  | 20.52       | 20.48         |                | 50/0           | 21.00                        | 20.44                  | 20.51       | 20.50       |
| 16QAM         | 1/0            | 21.00                        | 20.49                  | 20.57       | 20.59         | 16QAM          | 1/0            | 21.00                        | 20.57                  | 20.65       | 20.67       |
|               | 1/12           | 21.00                        | 20.57                  | 20.66       | 20.70         |                | 1/24           | 21.00                        | 20.70                  | 20.72       | 20.72       |
|               | 1/24           | 21.00                        | 20.54                  | 20.62       | 20.61         |                | 1/49           | 21.00                        | 20.63                  | 20.68       | 20.71       |
|               | 12/0           | 21.00                        | 20.39                  | 20.53       | 20.50         |                | 25/0           | 21.00                        | 20.44                  | 20.61       | 20.49       |
|               | 12/6           | 21.00                        | 20.45                  | 20.55       | 20.51         |                | 25/12          | 21.00                        | 20.51                  | 20.56       | 20.46       |
|               | 12/13          | 21.00                        | 20.47                  | 20.55       | 20.52         |                | 25/25          | 21.00                        | 20.56                  | 20.60       | 20.43       |
|               | 25/0           | 21.00                        | 20.47                  | 20.54       | 20.48         |                | 50/0           | 21.00                        | 20.45                  | 20.56       | 20.48       |
| 64QAM         | 1/0            | 21.00                        | 20.31                  | 20.38       | 20.41         | 64QAM          | 1/0            | 21.00                        | 20.32                  | 20.48       | 20.39       |
|               | 1/12           | 21.00                        | 20.45                  | 20.49       | 20.52         |                | 1/24           | 21.00                        | 20.43                  | 20.51       | 20.45       |
|               | 1/24           | 21.00                        | 20.36                  | 20.44       | 20.44         |                | 1/49           | 21.00                        | 20.39                  | 20.49       | 20.45       |
|               | 12/0           | 21.00                        | 20.37                  | 20.47       | 20.43         |                | 25/0           | 21.00                        | 20.42                  | 20.62       | 20.52       |
|               | 12/6           | 21.00                        | 20.44                  | 20.52       | 20.48         |                | 25/12          | 21.00                        | 20.53                  | 20.57       | 20.49       |
|               | 12/13          | 21.00                        | 20.43                  | 20.50       | 20.45         |                | 25/25          | 21.00                        | 20.53                  | 20.58       | 20.48       |
|               | 25/0           | 21.00                        | 20.46                  | 20.54       | 20.50         |                | 50/0           | 21.00                        | 20.42                  | 20.57       | 20.49       |

| LTE B66/BW=15M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=20M |                | Average Conducted Power(dBm) |                        |              |             |
|----------------|----------------|------------------------------|------------------------|-------------|---------------|----------------|----------------|------------------------------|------------------------|--------------|-------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |             |
|                |                |                              | 132047/1717.5          | 132272/1740 | 132497/1762.5 |                |                |                              | 132072/1720            | 132272/1740  | 132472/1760 |
| QPSK           | 1/0            | 21.00                        | 20.62                  | 20.32       | 20.56         | QPSK           | 1/0            | 21.00                        | 20.30                  | 20.67        | 20.18       |
|                | 1/37           | 21.00                        | 20.79                  | 20.47       | 20.72         |                | 1/50           | 21.00                        | <b>20.81</b>           | 20.78        | 20.79       |
|                | 1/74           | 21.00                        | 20.69                  | 20.40       | 20.62         |                | 1/99           | 21.00                        | 20.47                  | 20.79        | 20.29       |
|                | 36/0           | 21.00                        | 20.38                  | 20.40       | 20.42         |                | 50/0           | 21.00                        | 20.40                  | <b>20.51</b> | 20.39       |
|                | 36/19          | 21.00                        | 20.44                  | 20.46       | 20.47         |                | 50/25          | 21.00                        | 20.48                  | 20.51        | 20.47       |
|                | 36/39          | 21.00                        | 20.48                  | 20.48       | 20.45         |                | 50/50          | 21.00                        | 20.50                  | 20.45        | 20.46       |
|                | 75/0           | 21.00                        | 20.53                  | 20.49       | 20.52         |                | 100/0          | 21.00                        | 20.38                  | 20.49        | 20.45       |
| 16QAM          | 1/0            | 21.00                        | 20.52                  | 20.54       | 20.67         | 16QAM          | 1/0            | 21.00                        | 20.33                  | 20.41        | 20.60       |
|                | 1/37           | 21.00                        | 20.65                  | 20.70       | 20.72         |                | 1/50           | 21.00                        | 20.68                  | 20.54        | 20.62       |
|                | 1/74           | 21.00                        | 20.59                  | 20.63       | 20.72         |                | 1/99           | 21.00                        | 20.47                  | 20.49        | 20.69       |
|                | 36/0           | 21.00                        | 20.45                  | 20.63       | 20.39         |                | 50/0           | 21.00                        | 20.42                  | 20.49        | 20.37       |
|                | 36/19          | 21.00                        | 20.50                  | 20.48       | 20.43         |                | 50/25          | 21.00                        | 20.50                  | 20.47        | 20.47       |
|                | 36/39          | 21.00                        | 20.53                  | 20.51       | 20.42         |                | 50/50          | 21.00                        | 20.54                  | 20.43        | 20.45       |
|                | 75/0           | 21.00                        | 20.49                  | 20.52       | 20.48         |                | 100/0          | 21.00                        | 20.46                  | 20.52        | 20.48       |
| 64QAM          | 1/0            | 21.00                        | 20.27                  | 20.35       | 20.24         | 64QAM          | 1/0            | 21.00                        | 20.10                  | 20.21        | 20.07       |
|                | 1/37           | 21.00                        | 20.43                  | 20.51       | 20.39         |                | 1/50           | 21.00                        | 20.43                  | 20.50        | 20.41       |
|                | 1/74           | 21.00                        | 20.30                  | 20.41       | 20.32         |                | 1/99           | 21.00                        | 20.26                  | 20.23        | 20.20       |
|                | 36/0           | 21.00                        | 20.40                  | 20.41       | 20.45         |                | 50/0           | 21.00                        | 20.43                  | 20.59        | 20.38       |
|                | 36/19          | 21.00                        | 20.52                  | 20.54       | 20.51         |                | 50/25          | 21.00                        | 20.51                  | 20.55        | 20.50       |
|                | 36/39          | 21.00                        | 20.49                  | 20.56       | 20.50         |                | 50/50          | 21.00                        | 20.50                  | 20.50        | 20.48       |
|                | 75/0           | 21.00                        | 20.47                  | 20.57       | 20.49         |                | 100/0          | 21.00                        | 20.43                  | 20.54        | 20.48       |

Up Antenna Receiver on

| LTE B66/BW=1.4M |                       | Average Conducted Power(dBm) |                        |                 |                   | LTE B66/BW=3M   |                       | Average Conducted Power(dBm) |                        |                 |                   |
|-----------------|-----------------------|------------------------------|------------------------|-----------------|-------------------|-----------------|-----------------------|------------------------------|------------------------|-----------------|-------------------|
| Modula<br>-tion | RB<br>Size/<br>Offset | Max.<br>Tune-up              | Channel/Frequency(MHz) |                 |                   | Modula<br>-tion | RB<br>Size/<br>Offset | Max.<br>Tune-up              | Channel/Frequency(MHz) |                 |                   |
|                 |                       |                              | 131979/<br>1710.7      | 132272/<br>1740 | 132565/<br>1769.3 |                 |                       |                              | 131987/<br>1711.5      | 132272/<br>1740 | 132557/<br>1768.5 |
| QPSK            | 1/0                   | 20.00                        | 19.48                  | 19.64           | 19.63             | QPSK            | 1/0                   | 20.00                        | 19.54                  | 19.73           | 19.69             |
|                 | 1/2                   | 20.00                        | 19.64                  | 19.79           | 19.79             |                 | 1/7                   | 20.00                        | 19.69                  | 19.86           | 19.74             |
|                 | 1/5                   | 20.00                        | 19.50                  | 19.64           | 19.64             |                 | 1/14                  | 20.00                        | 19.57                  | 19.76           | 19.76             |
|                 | 3/0                   | 20.00                        | 19.52                  | 19.68           | 19.65             |                 | 8/0                   | 20.00                        | 19.58                  | 19.73           | 19.72             |
|                 | 3/1                   | 20.00                        | 19.55                  | 19.75           | 19.73             |                 | 8/3                   | 20.00                        | 19.62                  | 19.76           | 19.74             |
|                 | 3/3                   | 20.00                        | 19.52                  | 19.69           | 19.69             |                 | 8/7                   | 20.00                        | 19.59                  | 19.73           | 19.73             |
|                 | 6/0                   | 20.00                        | 19.54                  | 19.66           | 19.68             |                 | 15/0                  | 20.00                        | 19.59                  | 19.66           | 19.73             |
| 16QAM           | 1/0                   | 20.00                        | 19.77                  | 19.71           | 19.80             | 16QAM           | 1/0                   | 20.00                        | 19.70                  | 19.73           | 19.63             |
|                 | 1/2                   | 20.00                        | 19.82                  | 19.78           | 19.83             |                 | 1/7                   | 20.00                        | 19.84                  | 19.74           | 19.64             |
|                 | 1/5                   | 20.00                        | 19.78                  | 19.80           | 19.80             |                 | 1/14                  | 20.00                        | 19.76                  | 19.72           | 19.64             |
|                 | 3/0                   | 20.00                        | 19.58                  | 19.75           | 19.80             |                 | 8/0                   | 20.00                        | 19.64                  | 19.73           | 19.71             |
|                 | 3/1                   | 20.00                        | 19.60                  | 19.77           | 19.80             |                 | 8/3                   | 20.00                        | 19.68                  | 19.76           | 19.73             |
|                 | 3/3                   | 20.00                        | 19.57                  | 19.72           | 19.75             |                 | 8/7                   | 20.00                        | 19.67                  | 19.74           | 19.72             |
|                 | 6/0                   | 20.00                        | 19.65                  | 19.77           | 19.77             |                 | 15/0                  | 20.00                        | 19.63                  | 19.72           | 19.77             |
| 64QAM           | 1/0                   | 20.00                        | 19.72                  | 19.67           | 19.68             | 64QAM           | 1/0                   | 20.00                        | 19.69                  | 19.74           | 19.70             |
|                 | 1/2                   | 20.00                        | 19.85                  | 19.80           | 19.74             |                 | 1/7                   | 20.00                        | 19.78                  | 19.75           | 19.82             |
|                 | 1/5                   | 20.00                        | 19.73                  | 19.70           | 19.71             |                 | 1/14                  | 20.00                        | 19.74                  | 19.76           | 19.71             |
|                 | 3/0                   | 20.00                        | 19.59                  | 19.81           | 19.67             |                 | 8/0                   | 20.00                        | 19.65                  | 19.75           | 19.85             |
|                 | 3/1                   | 20.00                        | 19.63                  | 19.84           | 19.71             |                 | 8/3                   | 20.00                        | 19.68                  | 19.78           | 19.87             |
|                 | 3/3                   | 20.00                        | 19.53                  | 19.82           | 19.66             |                 | 8/7                   | 20.00                        | 19.65                  | 19.75           | 19.84             |
|                 | 6/0                   | 20.00                        | 19.66                  | 19.68           | 19.75             |                 | 15/0                  | 20.00                        | 19.66                  | 19.68           | 19.76             |

| LTE B66/BW=5M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=10M |                | Average Conducted Power(dBm) |                        |             |             |
|---------------|----------------|------------------------------|------------------------|-------------|---------------|----------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|               |                |                              | 131997/1712.5          | 132272/1740 | 132547/1767.5 |                |                |                              | 132022/1715            | 132272/1740 | 132522/1765 |
| QPSK          | 1/0            | 20.00                        | 19.53                  | 19.64       | 19.74         | QPSK           | 1/0            | 20.00                        | 19.52                  | 19.66       | 19.65       |
|               | 1/12           | 20.00                        | 19.63                  | 19.73       | 19.84         |                | 1/24           | 20.00                        | 19.63                  | 19.77       | 19.76       |
|               | 1/24           | 20.00                        | 19.57                  | 19.63       | 19.80         |                | 1/49           | 20.00                        | 19.61                  | 19.80       | 19.77       |
|               | 12/0           | 20.00                        | 19.56                  | 19.65       | 19.74         |                | 25/0           | 20.00                        | 19.61                  | 19.73       | 19.79       |
|               | 12/6           | 20.00                        | 19.63                  | 19.72       | 19.75         |                | 25/12          | 20.00                        | 19.68                  | 19.75       | 19.78       |
|               | 12/13          | 20.00                        | 19.63                  | 19.72       | 19.74         |                | 25/25          | 20.00                        | 19.66                  | 19.74       | 19.71       |
|               | 25/0           | 20.00                        | 19.62                  | 19.71       | 19.76         |                | 50/0           | 20.00                        | 19.61                  | 19.71       | 19.70       |
| 16QAM         | 1/0            | 20.00                        | 19.71                  | 19.57       | 19.67         | 16QAM          | 1/0            | 20.00                        | 19.58                  | 19.68       | 19.73       |
|               | 1/12           | 20.00                        | 19.83                  | 19.71       | 19.78         |                | 1/24           | 20.00                        | 19.65                  | 19.76       | 19.78       |
|               | 1/24           | 20.00                        | 19.76                  | 19.62       | 19.69         |                | 1/49           | 20.00                        | 19.64                  | 19.71       | 19.80       |
|               | 12/0           | 20.00                        | 19.57                  | 19.77       | 19.85         |                | 25/0           | 20.00                        | 19.59                  | 19.84       | 19.79       |
|               | 12/6           | 20.00                        | 19.61                  | 19.83       | 19.84         |                | 25/12          | 20.00                        | 19.70                  | 19.81       | 19.74       |
|               | 12/13          | 20.00                        | 19.61                  | 19.84       | 19.83         |                | 25/25          | 20.00                        | 19.64                  | 19.83       | 19.74       |
|               | 25/0           | 20.00                        | 19.59                  | 19.79       | 19.81         |                | 50/0           | 20.00                        | 19.56                  | 19.80       | 19.76       |
| 64QAM         | 1/0            | 20.00                        | 19.60                  | 19.61       | 19.74         | 64QAM          | 1/0            | 20.00                        | 19.79                  | 19.55       | 19.81       |
|               | 1/12           | 20.00                        | 19.75                  | 19.72       | 19.85         |                | 1/24           | 20.00                        | 19.76                  | 19.66       | 19.74       |
|               | 1/24           | 20.00                        | 19.66                  | 19.65       | 19.76         |                | 1/49           | 20.00                        | 19.73                  | 19.62       | 19.74       |
|               | 12/0           | 20.00                        | 19.54                  | 19.65       | 19.79         |                | 25/0           | 20.00                        | 19.59                  | 19.83       | 19.74       |
|               | 12/6           | 20.00                        | 19.59                  | 19.70       | 19.80         |                | 25/12          | 20.00                        | 19.64                  | 19.82       | 19.84       |
|               | 12/13          | 20.00                        | 19.59                  | 19.71       | 19.80         |                | 25/25          | 20.00                        | 19.63                  | 19.83       | 19.80       |
|               | 25/0           | 20.00                        | 19.62                  | 19.80       | 19.80         |                | 50/0           | 20.00                        | 19.56                  | 19.73       | 19.81       |

| LTE B66/BW=15M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=20M |                | Average Conducted Power(dBm) |                        |              |              |
|----------------|----------------|------------------------------|------------------------|-------------|---------------|----------------|----------------|------------------------------|------------------------|--------------|--------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |              |
|                |                |                              | 132047/1717.5          | 132272/1740 | 132497/1762.5 |                |                |                              | 132072/1720            | 132272/1740  | 132472/1760  |
| QPSK           | 1/0            | 20.00                        | 19.47                  | 19.60       | 19.56         | QPSK           | 1/0            | 20.00                        | 19.46                  | 19.49        | 19.51        |
|                | 1/37           | 20.00                        | 19.62                  | 19.76       | 19.67         |                | 1/50           | 20.00                        | 19.83                  | 19.81        | <b>19.87</b> |
|                | 1/74           | 20.00                        | 19.59                  | 19.71       | 19.58         |                | 1/99           | 20.00                        | 19.67                  | 19.55        | 19.65        |
|                | 36/0           | 20.00                        | 19.61                  | 19.71       | 19.70         |                | 50/0           | 20.00                        | 19.66                  | 19.76        | 19.67        |
|                | 36/19          | 20.00                        | 19.69                  | 19.77       | 19.79         |                | 50/25          | 20.00                        | 19.71                  | <b>19.75</b> | 19.73        |
|                | 36/39          | 20.00                        | 19.70                  | 19.74       | 19.75         |                | 50/50          | 20.00                        | 19.68                  | 19.68        | 19.66        |
|                | 75/0           | 20.00                        | 19.66                  | 19.75       | 19.75         |                | 100/0          | 20.00                        | 19.65                  | 19.73        | 19.72        |
| 16QAM          | 1/0            | 20.00                        | 19.77                  | 19.57       | 19.71         | 16QAM          | 1/0            | 20.00                        | 19.56                  | 19.67        | 19.75        |
|                | 1/37           | 20.00                        | 19.75                  | 19.76       | 19.86         |                | 1/50           | 20.00                        | 19.77                  | 19.70        | 19.83        |
|                | 1/74           | 20.00                        | 19.77                  | 19.67       | 19.82         |                | 1/99           | 20.00                        | 19.71                  | 19.77        | 19.76        |
|                | 36/0           | 20.00                        | 19.65                  | 19.80       | 19.69         |                | 50/0           | 20.00                        | 19.62                  | 19.68        | 19.64        |
|                | 36/19          | 20.00                        | 19.70                  | 19.73       | 19.72         |                | 50/25          | 20.00                        | 19.69                  | 19.69        | 19.73        |
|                | 36/39          | 20.00                        | 19.69                  | 19.75       | 19.71         |                | 50/50          | 20.00                        | 19.70                  | 19.68        | 19.70        |
|                | 75/0           | 20.00                        | 19.63                  | 19.77       | 19.76         |                | 100/0          | 20.00                        | 19.66                  | 19.76        | 19.77        |
| 64QAM          | 1/0            | 20.00                        | 19.75                  | 19.47       | 19.76         | 64QAM          | 1/0            | 20.00                        | 19.54                  | 19.86        | 19.69        |
|                | 1/37           | 20.00                        | 19.75                  | 19.65       | 19.77         |                | 1/50           | 20.00                        | 19.75                  | 19.68        | 19.75        |
|                | 1/74           | 20.00                        | 19.74                  | 19.54       | 19.72         |                | 1/99           | 20.00                        | 19.73                  | 19.83        | 19.83        |
|                | 36/0           | 20.00                        | 19.59                  | 19.67       | 19.71         |                | 50/0           | 20.00                        | 19.61                  | 19.75        | 19.69        |
|                | 36/19          | 20.00                        | 19.64                  | 19.72       | 19.76         |                | 50/25          | 20.00                        | 19.66                  | 19.76        | 19.75        |
|                | 36/39          | 20.00                        | 19.63                  | 19.76       | 19.75         |                | 50/50          | 20.00                        | 19.68                  | 19.73        | 19.72        |
|                | 75/0           | 20.00                        | 19.66                  | 19.76       | 19.82         |                | 100/0          | 20.00                        | 19.63                  | 19.80        | 19.78        |

Up Antenna Receiver off

| LTE B66/BW=1.4M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=3M |                | Average Conducted Power(dBm) |                        |             |               |
|-----------------|----------------|------------------------------|------------------------|-------------|---------------|---------------|----------------|------------------------------|------------------------|-------------|---------------|
| Modulation      | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               |
|                 |                |                              | 131979/1710.7          | 132272/1740 | 132565/1769.3 |               |                |                              | 131987/1711.5          | 132272/1740 | 132557/1768.5 |
| QPSK            | 1/0            | 21.00                        | 20.48                  | 20.61       | 20.62         | QPSK          | 1/0            | 21.00                        | 20.49                  | 20.71       | 20.68         |
|                 | 1/2            | 21.00                        | 20.65                  | 20.74       | 20.78         |               | 1/7            | 21.00                        | 20.82                  | 20.72       | 20.63         |
|                 | 1/5            | 21.00                        | 20.45                  | 20.65       | 20.58         |               | 1/14           | 21.00                        | 20.57                  | 20.74       | 20.71         |
|                 | 3/0            | 21.00                        | 20.56                  | 20.63       | 20.66         |               | 8/0            | 21.00                        | 20.56                  | 20.71       | 20.72         |
|                 | 3/1            | 21.00                        | 20.61                  | 20.70       | 20.72         |               | 8/3            | 21.00                        | 20.60                  | 20.74       | 20.74         |
|                 | 3/3            | 21.00                        | 20.56                  | 20.67       | 20.69         |               | 8/7            | 21.00                        | 20.56                  | 20.71       | 20.74         |
|                 | 6/0            | 21.00                        | 20.51                  | 20.64       | 20.66         |               | 15/0           | 21.00                        | 20.53                  | 20.67       | 20.70         |
| 16QAM           | 1/0            | 21.00                        | 20.71                  | 20.83       | 20.87         | 16QAM         | 1/0            | 21.00                        | 20.68                  | 20.76       | 20.86         |
|                 | 1/2            | 21.00                        | 20.87                  | 20.75       | 20.64         |               | 1/7            | 21.00                        | 20.65                  | 20.82       | 20.84         |
|                 | 1/5            | 21.00                        | 20.72                  | 20.86       | 20.76         |               | 1/14           | 21.00                        | 20.84                  | 20.81       | 20.87         |
|                 | 3/0            | 21.00                        | 20.57                  | 20.74       | 20.76         |               | 8/0            | 21.00                        | 20.62                  | 20.69       | 20.65         |
|                 | 3/1            | 21.00                        | 20.59                  | 20.77       | 20.79         |               | 8/3            | 21.00                        | 20.65                  | 20.74       | 20.70         |
|                 | 3/3            | 21.00                        | 20.54                  | 20.72       | 20.85         |               | 8/7            | 21.00                        | 20.63                  | 20.71       | 20.69         |
|                 | 6/0            | 21.00                        | 20.61                  | 20.74       | 20.73         |               | 15/0           | 21.00                        | 20.58                  | 20.69       | 20.74         |
| 64QAM           | 1/0            | 21.00                        | 20.69                  | 20.73       | 20.63         | 64QAM         | 1/0            | 21.00                        | 20.65                  | 20.69       | 20.66         |
|                 | 1/2            | 21.00                        | 20.79                  | 20.77       | 20.80         |               | 1/7            | 21.00                        | 20.75                  | 20.70       | 20.79         |
|                 | 1/5            | 21.00                        | 20.65                  | 20.78       | 20.63         |               | 1/14           | 21.00                        | 20.68                  | 20.73       | 20.64         |
|                 | 3/0            | 21.00                        | 20.56                  | 20.66       | 20.66         |               | 8/0            | 21.00                        | 20.59                  | 20.71       | 20.79         |
|                 | 3/1            | 21.00                        | 20.61                  | 20.71       | 20.69         |               | 8/3            | 21.00                        | 20.63                  | 20.78       | 20.83         |
|                 | 3/3            | 21.00                        | 20.51                  | 20.67       | 20.64         |               | 8/7            | 21.00                        | 20.60                  | 20.72       | 20.82         |
|                 | 6/0            | 21.00                        | 20.58                  | 20.67       | 20.71         |               | 15/0           | 21.00                        | 20.61                  | 20.66       | 20.73         |

| LTE B66/BW=5M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=10M |                | Average Conducted Power(dBm) |                        |             |             |
|---------------|----------------|------------------------------|------------------------|-------------|---------------|----------------|----------------|------------------------------|------------------------|-------------|-------------|
| Modulation    | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |             |
|               |                |                              | 131997/1712.5          | 132272/1740 | 132547/1767.5 |                |                |                              | 132022/1715            | 132272/1740 | 132522/1765 |
| QPSK          | 1/0            | 21.00                        | 20.48                  | 20.63       | 20.68         | QPSK           | 1/0            | 21.00                        | 20.51                  | 20.70       | 20.66       |
|               | 1/12           | 21.00                        | 20.62                  | 20.73       | 20.84         |                | 1/24           | 21.00                        | 20.62                  | 20.77       | 20.75       |
|               | 1/24           | 21.00                        | 20.57                  | 20.67       | 20.74         |                | 1/49           | 21.00                        | 20.55                  | 20.73       | 20.75       |
|               | 12/0           | 21.00                        | 20.55                  | 20.70       | 20.76         |                | 25/0           | 21.00                        | 20.62                  | 20.82       | 20.84       |
|               | 12/6           | 21.00                        | 20.62                  | 20.76       | 20.78         |                | 25/12          | 21.00                        | 20.74                  | 20.79       | 20.80       |
|               | 12/13          | 21.00                        | 20.62                  | 20.76       | 20.78         |                | 25/25          | 21.00                        | 20.69                  | 20.80       | 20.79       |
|               | 25/0           | 21.00                        | 20.63                  | 20.79       | 20.82         |                | 50/0           | 21.00                        | 20.62                  | 20.80       | 20.79       |
| 16QAM         | 1/0            | 21.00                        | 20.80                  | 20.80       | 20.75         | 16QAM          | 1/0            | 21.00                        | 20.76                  | 20.88       | 20.80       |
|               | 1/12           | 21.00                        | 20.67                  | 20.79       | 20.86         |                | 1/24           | 21.00                        | 20.72                  | 20.84       | 20.86       |
|               | 1/24           | 21.00                        | 20.84                  | 20.85       | 20.77         |                | 1/49           | 21.00                        | 20.69                  | 20.81       | 20.87       |
|               | 12/0           | 21.00                        | 20.56                  | 20.74       | 20.79         |                | 25/0           | 21.00                        | 20.63                  | 20.81       | 20.75       |
|               | 12/6           | 21.00                        | 20.61                  | 20.77       | 20.81         |                | 25/12          | 21.00                        | 20.69                  | 20.80       | 20.74       |
|               | 12/13          | 21.00                        | 20.61                  | 20.80       | 20.82         |                | 25/25          | 21.00                        | 20.72                  | 20.85       | 20.72       |
|               | 25/0           | 21.00                        | 20.63                  | 20.77       | 20.78         |                | 50/0           | 21.00                        | 20.63                  | 20.80       | 20.76       |
| 64QAM         | 1/0            | 21.00                        | 20.82                  | 20.78       | 20.76         | 64QAM          | 1/0            | 21.00                        | 20.83                  | 20.69       | 20.87       |
|               | 1/12           | 21.00                        | 20.82                  | 20.76       | 20.87         |                | 1/24           | 21.00                        | 20.82                  | 20.74       | 20.82       |
|               | 1/24           | 21.00                        | 20.86                  | 20.85       | 20.84         |                | 1/49           | 21.00                        | 20.82                  | 20.71       | 20.81       |
|               | 12/0           | 21.00                        | 20.52                  | 20.63       | 20.75         |                | 25/0           | 21.00                        | 20.60                  | 20.83       | 20.87       |
|               | 12/6           | 21.00                        | 20.57                  | 20.66       | 20.76         |                | 25/12          | 21.00                        | 20.66                  | 20.81       | 20.83       |
|               | 12/13          | 21.00                        | 20.58                  | 20.68       | 20.79         |                | 25/25          | 21.00                        | 20.68                  | 20.83       | 20.81       |
|               | 25/0           | 21.00                        | 20.65                  | 20.76       | 20.79         |                | 50/0           | 21.00                        | 20.59                  | 20.74       | 20.79       |

| LTE B66/BW=15M |                | Average Conducted Power(dBm) |                        |             |               | LTE B66/BW=20M |                | Average Conducted Power(dBm) |                        |              |             |
|----------------|----------------|------------------------------|------------------------|-------------|---------------|----------------|----------------|------------------------------|------------------------|--------------|-------------|
| Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |             |               | Modulation     | RB Size/Offset | Max. Tune-up                 | Channel/Frequency(MHz) |              |             |
|                |                |                              | 132047/1717.5          | 132272/1740 | 132497/1762.5 |                |                |                              | 132072/1720            | 132272/1740  | 132472/1760 |
| QPSK           | 1/0            | 21.00                        | 20.44                  | 20.62       | 20.52         | QPSK           | 1/0            | 21.00                        | 20.44                  | 20.48        | 20.53       |
|                | 1/37           | 21.00                        | 20.58                  | 20.75       | 20.70         |                | 1/50           | 21.00                        | 20.81                  | <b>20.88</b> | 20.86       |
|                | 1/74           | 21.00                        | 20.54                  | 20.66       | 20.62         |                | 1/99           | 21.00                        | 20.64                  | 20.53        | 20.65       |
|                | 36/0           | 21.00                        | 20.61                  | 20.66       | 20.77         |                | 50/0           | 21.00                        | 20.67                  | 20.76        | 20.68       |
|                | 36/19          | 21.00                        | 20.70                  | 20.79       | 20.83         |                | 50/25          | 21.00                        | 20.71                  | <b>20.81</b> | 20.79       |
|                | 36/39          | 21.00                        | 20.71                  | 20.80       | 20.80         |                | 50/50          | 21.00                        | 20.75                  | 20.75        | 20.76       |
|                | 75/0           | 21.00                        | 20.68                  | 20.80       | 20.80         |                | 100/0          | 21.00                        | 20.62                  | 20.74        | 20.75       |
| 16QAM          | 1/0            | 21.00                        | 20.68                  | 20.82       | 20.81         | 16QAM          | 1/0            | 21.00                        | 20.49                  | 20.65        | 20.72       |
|                | 1/37           | 21.00                        | 20.82                  | 20.81       | 20.82         |                | 1/50           | 21.00                        | 20.86                  | 20.72        | 20.79       |
|                | 1/74           | 21.00                        | 20.77                  | 20.86       | 20.78         |                | 1/99           | 21.00                        | 20.72                  | 20.74        | 20.86       |
|                | 36/0           | 21.00                        | 20.62                  | 20.86       | 20.67         |                | 50/0           | 21.00                        | 20.64                  | 20.68        | 20.68       |
|                | 36/19          | 21.00                        | 20.71                  | 20.73       | 20.73         |                | 50/25          | 21.00                        | 20.71                  | 20.72        | 20.75       |
|                | 36/39          | 21.00                        | 20.70                  | 20.73       | 20.72         |                | 50/50          | 21.00                        | 20.72                  | 20.70        | 20.72       |
|                | 75/0           | 21.00                        | 20.68                  | 20.75       | 20.76         |                | 100/0          | 21.00                        | 20.63                  | 20.74        | 20.73       |
| 64QAM          | 1/0            | 21.00                        | 20.67                  | 20.58       | 20.68         | 64QAM          | 1/0            | 21.00                        | 20.46                  | 20.69        | 20.64       |
|                | 1/37           | 21.00                        | 20.80                  | 20.72       | 20.84         |                | 1/50           | 21.00                        | 20.81                  | 20.69        | 20.70       |
|                | 1/74           | 21.00                        | 20.73                  | 20.66       | 20.80         |                | 1/99           | 21.00                        | 20.68                  | 20.66        | 20.54       |
|                | 36/0           | 21.00                        | 20.56                  | 20.66       | 20.72         |                | 50/0           | 21.00                        | 20.59                  | 20.74        | 20.69       |
|                | 36/19          | 21.00                        | 20.62                  | 20.70       | 20.74         |                | 50/25          | 21.00                        | 20.68                  | 20.77        | 20.77       |
|                | 36/39          | 21.00                        | 20.67                  | 20.72       | 20.75         |                | 50/50          | 21.00                        | 20.69                  | 20.75        | 20.75       |
|                | 75/0           | 21.00                        | 20.67                  | 20.72       | 20.83         |                | 100/0          | 21.00                        | 20.60                  | 20.77        | 20.76       |

Note: The tested channels are marks in bold.

#### 7.1.4 CONDUCTED POWER MEASUREMENTS OF BT

| BT   | Average Conducted Power(dBm) |              |         |         |
|------|------------------------------|--------------|---------|---------|
|      | Max.                         | CH0          | CH39    | CH78    |
|      | Tune up                      | 2402MHz      | 2441MHz | 2480MHz |
| DH5  | 11.00                        | <b>10.09</b> | 9.46    | 9.08    |
| 2DH5 | 8.00                         | 7.52         | 6.24    | 6.07    |
| 3DH5 | 8.00                         | 7.66         | 6.30    | 6.04    |

| BT      | Average Conducted Power(dBm) |         |         |         |
|---------|------------------------------|---------|---------|---------|
|         | Max.                         | CH0     | CH19    | CH39    |
|         | Tune up                      | 2402MHz | 2441MHz | 2480MHz |
| BLE(1M) | 6.00                         | 5.29    | 5.95    | 4.97    |
| BLE(2M) | 5.00                         | 3.34    | 4.39    | 3.34    |

Note:

- 1) The conducted power of BT is measured with RMS detector.
- 2) The tested channels are marks in bold.

### 7.1.5 CONDUCTED POWER MEASUREMENTS OF WIFI

#### 1. Conducted power measurement results of WiFi 2.4G

##### Full Power

| Mode         | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|--------------|---------|-----------------|------------------|--------------|--------------------|
| 802.11b      | 1       | 2412            | 1                | 16.00        | 15.62              |
|              | 6       | 2437            |                  | 19.00        | <b>18.71</b>       |
|              | 11      | 2462            |                  | 16.00        | 15.62              |
| 802.11g      | 1       | 2412            | 6                | 16.00        | 15.66              |
|              | 6       | 2437            |                  | 19.00        | 17.52              |
|              | 11      | 2462            |                  | 16.00        | 15.79              |
| 802.11n HT20 | 1       | 2412            | 6.5              | 16.00        | 15.61              |
|              | 6       | 2437            |                  | 19.00        | 17.45              |
|              | 11      | 2462            |                  | 16.00        | 15.65              |

##### Receiver on & Receiver off

| Mode         | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|--------------|---------|-----------------|------------------|--------------|--------------------|
| 802.11b      | 1       | 2412            | 1                | 15.00        | 14.86              |
|              | 6       | 2437            |                  | 18.00        | <b>16.77</b>       |
|              | 11      | 2462            |                  | 15.00        | 14.55              |
| 802.11g      | 1       | 2412            | 6                | 15.00        | 14.57              |
|              | 6       | 2437            |                  | 18.00        | 17.72              |
|              | 11      | 2462            |                  | 15.00        | 14.75              |
| 802.11n HT20 | 1       | 2412            | 6.5              | 15.00        | 14.63              |
|              | 6       | 2437            |                  | 18.00        | 17.66              |
|              | 11      | 2462            |                  | 15.00        | 14.61              |

## WiFi Antenna Simultaneous with 2G&amp;3G&amp;4G Receiver on

| Mode                | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|---------------------|---------|-----------------|------------------|--------------|--------------------|
| <b>802.11b</b>      | 1       | 2412            | 1                | 14.00        | <b>13.75</b>       |
|                     | 6       | 2437            |                  | 14.00        | 13.73              |
|                     | 11      | 2462            |                  | 14.00        | 13.34              |
| <b>802.11g</b>      | 1       | 2412            | 6                | 13.00        | 12.63              |
|                     | 6       | 2437            |                  | 13.00        | 12.53              |
|                     | 11      | 2462            |                  | 13.00        | 12.57              |
| <b>802.11n HT20</b> | 1       | 2412            | 6.5              | 13.00        | 12.58              |
|                     | 6       | 2437            |                  | 13.00        | 12.44              |
|                     | 11      | 2462            |                  | 13.00        | 12.51              |

## Note:

- 1) The Average conducted power of WiFi 2.4G is measured with RMS detector.
- 2) Per KDB248227 D01, for WiFi 2.4G, the highest measured maximum output power Channel for DSSS modes (802.11b) was selected for SAR measurement. SAR for OFDM modes (2.4GHz 802.11g/n) was not required When the highest reported SAR for DSSS is adjusted by the ratio of OFDM modes (802.11g/n) to DSSS modes (802.11b) specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg.
- 3) The tested channels are marks in bold.

## 2. Conducted power measurement results of WiFi 5.2G

## Full Power

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.2G | 802.11a        | 36      | 5180            | 6                | 15.00        | 13.37              |
|      |                | 40      | 5200            |                  | 18.00        | 17.63              |
|      |                | 44      | 5220            |                  | 20.00        | 18.69              |
|      |                | 48      | 5240            |                  | 20.00        | <b>18.72</b>       |
|      | 802.11n HT20   | 36      | 5180            | MCS0             | 15.00        | 13.09              |
|      |                | 40      | 5200            |                  | 18.00        | 17.66              |
|      |                | 44      | 5220            |                  | 20.00        | 18.13              |
|      |                | 48      | 5240            |                  | 20.00        | 18.51              |
|      | 802.11n HT40   | 38      | 5190            | MCS0             | 15.00        | 13.72              |
|      |                | 46      | 5230            |                  | 18.00        | 17.66              |
|      | 802.11ac VHT20 | 36      | 5180            | MCS0             | 15.00        | 13.52              |
|      |                | 40      | 5200            |                  | 18.00        | 17.80              |
|      |                | 44      | 5220            |                  | 20.00        | 18.63              |
|      |                | 48      | 5240            |                  | 20.00        | 18.61              |
|      | 802.11ac VHT40 | 38      | 5190            | MCS0             | 15.00        | 13.38              |
|      |                | 46      | 5230            |                  | 18.00        | 17.67              |
|      | 802.11ac VHT80 | 42      | 5210            | MCS0             | 14.00        | 12.36              |

Receiver on &amp; Receiver off (Hotspot)

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.2G | 802.11a        | 36      | 5180            | 6                | 13.00        | 11.57              |
|      |                | 40      | 5200            |                  | 13.00        | 11.66              |
|      |                | 44      | 5220            |                  | 13.00        | 11.66              |
|      |                | 48      | 5240            |                  | 13.00        | <b>11.68</b>       |
|      | 802.11n HT20   | 36      | 5180            | MCS0             | 13.00        | 11.49              |
|      |                | 40      | 5200            |                  | 13.00        | 11.48              |
|      |                | 44      | 5220            |                  | 13.00        | 11.50              |
|      |                | 48      | 5240            |                  | 13.00        | 11.54              |
|      | 802.11n HT40   | 38      | 5190            | MCS0             | 12.00        | 10.51              |
|      |                | 46      | 5230            |                  | 12.00        | 10.53              |
|      | 802.11ac VHT20 | 36      | 5180            | MCS0             | 13.00        | 11.48              |
|      |                | 40      | 5200            |                  | 13.00        | 11.50              |
|      |                | 44      | 5220            |                  | 13.00        | 11.54              |
|      |                | 48      | 5240            |                  | 13.00        | 11.54              |
|      | 802.11ac VHT40 | 38      | 5190            | MCS0             | 12.00        | 10.51              |
|      |                | 46      | 5230            |                  | 12.00        | 10.53              |
|      | 802.11ac VHT80 | 42      | 5210            | MCS0             | 12.00        | 10.43              |

WiFi Antenna Simultaneous with 2G&amp;3G&amp;4G Receiver on

| Band | Mode                  | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|-----------------------|---------|-----------------|------------------|--------------|--------------------|
| 5.2G | <b>802.11a</b>        | 36      | 5180            | 6                | 10.00        | 9.82               |
|      |                       | 40      | 5200            |                  | 10.00        | 9.86               |
|      |                       | 44      | 5220            |                  | 10.00        | 9.85               |
|      |                       | 48      | 5240            |                  | 10.00        | 9.76               |
|      | <b>802.11n HT20</b>   | 36      | 5180            | MCS0             | 10.00        | 9.78               |
|      |                       | 40      | 5200            |                  | 10.00        | 9.73               |
|      |                       | 44      | 5220            |                  | 10.00        | 9.76               |
|      |                       | 48      | 5240            |                  | 10.00        | 9.62               |
|      | <b>802.11n HT40</b>   | 38      | 5190            | MCS0             | 9.00         | 8.75               |
|      |                       | 46      | 5230            |                  | 9.00         | 8.73               |
|      | <b>802.11ac VHT20</b> | 36      | 5180            | MCS0             | 10.00        | 9.62               |
|      |                       | 40      | 5200            |                  | 10.00        | 9.75               |
|      |                       | 44      | 5220            |                  | 10.00        | 9.76               |
|      |                       | 48      | 5240            |                  | 10.00        | 9.67               |
|      | <b>802.11ac VHT40</b> | 38      | 5190            | MCS0             | 9.00         | 8.88               |
|      |                       | 46      | 5230            |                  | 9.00         | 8.71               |
|      | <b>802.11ac VHT80</b> | 42      | 5210            | MCS0             | 9.00         | 8.81               |

Note:

- 1) The Average conducted power of WiFi 5.2G is measured with RMS detector.
- 2) The tested channels are marks in bold.

### 3. Conducted power measurement results of WiFi 5.3G

#### Full Power

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.3G | 802.11a        | 52      | 5260            | 6                | 20.00        | 18.69              |
|      |                | 56      | 5280            |                  | 20.00        | <b>18.85</b>       |
|      |                | 60      | 5300            |                  | 17.00        | 16.70              |
|      |                | 64      | 5320            |                  | 14.00        | 13.17              |
|      | 802.11n HT20   | 52      | 5260            | MCS0             | 20.00        | 18.56              |
|      |                | 56      | 5280            |                  | 20.00        | 18.52              |
|      |                | 60      | 5300            |                  | 17.00        | 15.15              |
|      |                | 64      | 5320            |                  | 14.00        | 12.03              |
|      | 802.11n HT40   | 54      | 5270            | MCS0             | 17.00        | 16.72              |
|      |                | 62      | 5310            |                  | 13.00        | 11.53              |
|      | 802.11ac VHT20 | 52      | 5260            | MCS0             | 20.00        | 18.61              |
|      |                | 56      | 5280            |                  | 20.00        | 18.57              |
|      |                | 60      | 5300            |                  | 17.00        | 16.56              |
|      |                | 64      | 5320            |                  | 14.00        | 12.53              |
|      | 802.11ac VHT40 | 54      | 5270            | MCS0             | 17.00        | 15.62              |
|      |                | 62      | 5310            |                  | 13.00        | 11.51              |
|      | 802.11ac VHT80 | 58      | 5290            | MCS0             | 12.00        | 10.45              |

Receiver on

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.3G | 802.11a        | 52      | 5260            | 6                | 13.00        | <b>11.71</b>       |
|      |                | 56      | 5280            |                  | 13.00        | 11.69              |
|      |                | 60      | 5300            |                  | 13.00        | 11.65              |
|      |                | 64      | 5320            |                  | 13.00        | 11.62              |
|      | 802.11n HT20   | 52      | 5260            | MCS0             | 13.00        | 11.67              |
|      |                | 56      | 5280            |                  | 13.00        | 11.64              |
|      |                | 60      | 5300            |                  | 13.00        | 11.67              |
|      |                | 64      | 5320            |                  | 13.00        | 11.59              |
|      | 802.11n HT40   | 54      | 5270            | MCS0             | 12.00        | 10.61              |
|      |                | 62      | 5310            |                  | 12.00        | 10.58              |
|      | 802.11ac VHT20 | 52      | 5260            | MCS0             | 13.00        | 11.56              |
|      |                | 56      | 5280            |                  | 13.00        | 11.57              |
|      |                | 60      | 5300            |                  | 13.00        | 11.57              |
|      |                | 64      | 5320            |                  | 13.00        | 11.59              |
|      | 802.11ac VHT40 | 54      | 5270            | MCS0             | 12.00        | 10.57              |
|      |                | 62      | 5310            |                  | 12.00        | 10.55              |
|      | 802.11ac VHT80 | 58      | 5290            | MCS0             | 12.00        | 10.57              |

Receiver off (Specific 10g SAR)

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.3G | 802.11a        | 52      | 5260            | 6                | 19.00        | 18.69              |
|      |                | 56      | 5280            |                  | 19.00        | <b>18.85</b>       |
|      |                | 60      | 5300            |                  | 16.00        | 15.70              |
|      |                | 64      | 5320            |                  | 13.00        | 12.17              |
|      | 802.11n HT20   | 52      | 5260            | MCS0             | 19.00        | 18.56              |
|      |                | 56      | 5280            |                  | 19.00        | 18.52              |
|      |                | 60      | 5300            |                  | 16.00        | 15.15              |
|      |                | 64      | 5320            |                  | 13.00        | 12.03              |
|      | 802.11n HT40   | 54      | 5270            | MCS0             | 16.00        | 15.72              |
|      |                | 62      | 5310            |                  | 12.00        | 11.53              |
|      | 802.11ac VHT20 | 52      | 5260            | MCS0             | 19.00        | 18.61              |
|      |                | 56      | 5280            |                  | 19.00        | 18.57              |
|      |                | 60      | 5300            |                  | 16.00        | 15.56              |
|      |                | 64      | 5320            |                  | 13.00        | 12.53              |
|      | 802.11ac VHT40 | 54      | 5270            | MCS0             | 16.00        | 15.62              |
|      |                | 62      | 5310            |                  | 12.00        | 11.51              |
|      | 802.11ac VHT80 | 58      | 5290            | MCS0             | 11.00        | 10.45              |

WiFi Antenna Simultaneous with 2G&amp;3G&amp;4G Receiver on

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.3G | 802.11a        | 52      | 5260            | 6                | 10.00        | <b>9.65</b>        |
|      |                | 56      | 5280            |                  | 10.00        | 9.30               |
|      |                | 60      | 5300            |                  | 10.00        | 9.56               |
|      |                | 64      | 5320            |                  | 10.00        | 9.61               |
|      | 802.11n HT20   | 52      | 5260            | MCS0             | 10.00        | 9.71               |
|      |                | 56      | 5280            |                  | 10.00        | 9.67               |
|      |                | 60      | 5300            |                  | 10.00        | 9.76               |
|      |                | 64      | 5320            |                  | 10.00        | 9.73               |
|      | 802.11n HT40   | 54      | 5270            | MCS0             | 9.00         | 8.72               |
|      |                | 62      | 5310            |                  | 9.00         | 8.76               |
|      | 802.11ac VHT20 | 52      | 5260            | MCS0             | 10.00        | 9.72               |
|      |                | 56      | 5280            |                  | 10.00        | 9.65               |
|      |                | 60      | 5300            |                  | 10.00        | 9.75               |
|      |                | 64      | 5320            |                  | 10.00        | 9.72               |
|      | 802.11ac VHT40 | 54      | 5270            | MCS0             | 9.00         | 8.70               |
|      |                | 62      | 5310            |                  | 9.00         | 8.87               |
|      | 802.11ac VHT80 | 58      | 5290            | MCS0             | 9.00         | 8.83               |

Note:

- 1) The Average conducted power of WiFi 5.3G is measured with RMS detector.
- 2) The tested channels are marks in bold.

## 4. Conducted power measurement results of WiFi 5.6G

Full Power &amp; Receiver off (Specific 10g SAR)

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.6G | 802.11a        | 100     | 5500            | 6                | 15.00        | 13.35              |
|      |                | 104     | 5520            |                  | 20.00        | 18.62              |
|      |                | 108     | 5540            |                  | 20.00        | <b>18.67</b>       |
|      |                | 112     | 5560            |                  | 20.00        | 18.65              |
|      |                | 116     | 5580            |                  | 20.00        | 18.45              |
|      |                | 132     | 5660            |                  | 20.00        | 18.52              |
|      |                | 136     | 5680            |                  | 20.00        | 18.51              |
|      |                | 140     | 5700            |                  | 15.00        | 13.38              |
|      | 802.11n HT20   | 100     | 5500            | MCS0             | 15.00        | 13.07              |
|      |                | 104     | 5520            |                  | 20.00        | 18.46              |
|      |                | 108     | 5540            |                  | 20.00        | 18.42              |
|      |                | 112     | 5560            |                  | 20.00        | 18.53              |
|      |                | 116     | 5580            |                  | 20.00        | 18.51              |
|      |                | 132     | 5660            |                  | 20.00        | 18.41              |
|      |                | 136     | 5680            |                  | 20.00        | 18.39              |
|      |                | 140     | 5700            |                  | 15.00        | 13.53              |
|      | 802.11n HT40   | 102     | 5510            | MCS0             | 12.00        | 11.59              |
|      |                | 110     | 5550            |                  | 17.00        | 16.62              |
|      |                | 134     | 5670            |                  | 15.00        | 13.02              |
|      | 802.11ac VHT20 | 100     | 5500            | MCS0             | 15.00        | 13.58              |
|      |                | 104     | 5520            |                  | 20.00        | 18.52              |
|      |                | 108     | 5540            |                  | 20.00        | 18.47              |
|      |                | 112     | 5560            |                  | 20.00        | 18.48              |
|      |                | 116     | 5580            |                  | 20.00        | 18.51              |
|      |                | 132     | 5660            |                  | 20.00        | 18.40              |
|      |                | 136     | 5680            |                  | 20.00        | 18.43              |
|      |                | 140     | 5700            |                  | 15.00        | 13.53              |
|      | 802.11ac VHT40 | 102     | 5510            | MCS0             | 12.00        | 10.58              |
|      |                | 110     | 5550            |                  | 17.00        | 15.67              |
|      |                | 134     | 5670            |                  | 15.00        | 14.61              |
|      | 802.11ac VHT80 | 106     | 5530            | MCS0             | 13.00        | 11.46              |

## WiFi Antenna Simultaneous with 2G&amp;3G&amp;4G Receiver on

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.6G | 802.11a        | 100     | 5500            | 6                | 9.00         | 8.12               |
|      |                | 104     | 5520            |                  | 9.00         | 8.16               |
|      |                | 108     | 5540            |                  | 9.00         | <b>8.28</b>        |
|      |                | 112     | 5560            |                  | 9.00         | 8.26               |
|      |                | 116     | 5580            |                  | 9.00         | 8.23               |
|      |                | 132     | 5660            |                  | 9.00         | 8.13               |
|      |                | 136     | 5680            |                  | 9.00         | 8.11               |
|      |                | 140     | 5700            |                  | 9.00         | 8.08               |
|      | 802.11n HT20   | 100     | 5500            | MCS0             | 9.00         | 8.66               |
|      |                | 104     | 5520            |                  | 9.00         | 8.64               |
|      |                | 108     | 5540            |                  | 9.00         | 8.73               |
|      |                | 112     | 5560            |                  | 9.00         | 8.72               |
|      |                | 116     | 5580            |                  | 9.00         | 8.81               |
|      |                | 132     | 5660            |                  | 9.00         | 8.51               |
|      |                | 136     | 5680            |                  | 9.00         | 8.53               |
|      |                | 140     | 5700            |                  | 9.00         | 8.70               |
|      | 802.11n HT40   | 102     | 5510            | MCS0             | 8.00         | 7.76               |
|      |                | 110     | 5550            |                  | 8.00         | 7.78               |
|      |                | 134     | 5670            |                  | 8.00         | 7.50               |
|      | 802.11ac VHT20 | 100     | 5500            | MCS0             | 9.00         | 8.58               |
|      |                | 104     | 5520            |                  | 9.00         | 8.71               |
|      |                | 108     | 5540            |                  | 9.00         | 8.76               |
|      |                | 112     | 5560            |                  | 9.00         | 8.79               |
|      |                | 116     | 5580            |                  | 9.00         | 8.82               |
|      |                | 132     | 5660            |                  | 9.00         | 8.50               |
|      |                | 136     | 5680            |                  | 9.00         | 8.61               |
|      |                | 140     | 5700            |                  | 9.00         | 8.72               |
|      | 802.11ac VHT40 | 102     | 5510            | MCS0             | 8.00         | 7.80               |
|      |                | 110     | 5550            |                  | 8.00         | 7.75               |
|      |                | 134     | 5670            |                  | 8.00         | 7.50               |
|      | 802.11ac VHT80 | 106     | 5530            | MCS0             | 8.00         | 7.76               |

Note:

- 1) The Average conducted power of WiFi 5.6G is measured with RMS detector.
- 2) The tested channels are marks in bold.

## 5. Conducted power measurement results of WiFi 5.8G

Full Power &amp; Receiver off (Hotspot)

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.8G | 802.11a        | 149     | 5745            | 6                | 20.00        | 18.57              |
|      |                | 153     | 5765            |                  | 20.00        | 18.65              |
|      |                | 157     | 5785            |                  | 20.00        | <b>18.68</b>       |
|      |                | 161     | 5805            |                  | 20.00        | 18.61              |
|      |                | 165     | 5825            |                  | 20.00        | 18.59              |
|      | 802.11n HT20   | 149     | 5745            | MCS0             | 20.00        | 18.46              |
|      |                | 153     | 5765            |                  | 20.00        | 18.51              |
|      |                | 157     | 5785            |                  | 20.00        | 18.51              |
|      |                | 161     | 5805            |                  | 20.00        | 18.57              |
|      |                | 165     | 5825            |                  | 20.00        | 18.49              |
|      | 802.11n HT40   | 151     | 5755            | MCS0             | 19.00        | 17.47              |
|      |                | 159     | 5795            |                  | 19.00        | 17.58              |
|      | 802.11ac VHT20 | 149     | 5745            | MCS0             | 20.00        | 18.48              |
|      |                | 153     | 5765            |                  | 20.00        | 18.55              |
|      |                | 157     | 5785            |                  | 20.00        | 18.42              |
|      |                | 161     | 5805            |                  | 20.00        | 18.53              |
|      |                | 165     | 5825            |                  | 20.00        | 18.56              |
|      | 802.11ac VHT40 | 151     | 5755            | MCS0             | 19.00        | 17.51              |
|      |                | 159     | 5795            |                  | 19.00        | 17.70              |
|      | 802.11ac VHT80 | 155     | 5775            | MCS0             | 19.00        | 17.50              |

## WiFi Antenna Simultaneous with 2G&amp;3G&amp;4G Receiver on

| Band | Mode           | Channel | Frequency (MHz) | Data Rate (Mbps) | Max. Tune up | Average Power(dBm) |
|------|----------------|---------|-----------------|------------------|--------------|--------------------|
| 5.8G | 802.11a        | 149     | 5745            | 6                | 8.00         | <b>7.84</b>        |
|      |                | 153     | 5765            |                  | 8.00         | 7.68               |
|      |                | 157     | 5785            |                  | 8.00         | 7.78               |
|      |                | 161     | 5805            |                  | 8.00         | 7.83               |
|      |                | 165     | 5825            |                  | 8.00         | 7.82               |
|      | 802.11n HT20   | 149     | 5745            | MCS0             | 8.00         | 7.78               |
|      |                | 153     | 5765            |                  | 8.00         | 7.82               |
|      |                | 157     | 5785            |                  | 8.00         | 7.85               |
|      |                | 161     | 5805            |                  | 8.00         | 7.90               |
|      |                | 165     | 5825            |                  | 8.00         | 7.80               |
|      | 802.11n HT40   | 151     | 5755            | MCS0             | 7.00         | 6.90               |
|      |                | 159     | 5795            |                  | 7.00         | 6.91               |
|      | 802.11ac VHT20 | 149     | 5745            | MCS0             | 8.00         | 7.80               |
|      |                | 153     | 5765            |                  | 8.00         | 7.85               |
|      |                | 157     | 5785            |                  | 8.00         | 7.86               |
|      |                | 161     | 5805            |                  | 8.00         | 7.89               |
|      |                | 165     | 5825            |                  | 8.00         | 7.91               |
|      | 802.11ac VHT40 | 151     | 5755            | MCS0             | 7.00         | 6.85               |
|      |                | 159     | 5795            |                  | 7.00         | 6.83               |
|      | 802.11ac VHT80 | 155     | 5775            | MCS0             | 7.00         | 6.85               |

## Note:

- 1) The Average conducted power of WiFi 5.8G is measured with RMS detector.
- 2) The tested channels are marks in bold.

## 7.2 SAR TEST RESULTS

### General Notes:

- 1) Per KDB447498 D01, all measurement SAR results are scaled to the maximum tune-up tolerance limit to demonstrate compliant.
- 2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:  $\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz. When the maximum output power variation across the required test channels is  $> \frac{1}{2}$  dB, instead of the middle channel, the highest output power channel must be used.
- 3) Per KDB865664 D01, for each frequency band, repeated SAR measurement is required only when the measured SAR is  $\geq 0.8$  W/kg; if the deviation among the repeated measurement is  $\leq 20\%$ , and the measured SAR  $< 1.45$  W/kg, only one repeated measurement is required.
- 4) Per KDB941225 D06, the DUT Dimension is bigger than 9 cm x 5 cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.
- 5) Per KDB648474 D04, SAR is evaluated without a headset connected to the device. When the standalone reported body-worn SAR is  $\leq 1.2$  W/kg, no additional SAR evaluations using a headset are required.
- 6) Per KDB865664 D02, SAR plot is only required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination; Plots are also required when the measured SAR is  $> 1.5$  W/kg, or  $> 7.0$  W/kg for occupational exposure. The published RF exposure KDB procedures may require additional plots; for example, to support SAR to peak location separation ratio test exclusion and/or volume scan post-processing.

### GSM Notes:

- 1) Per KDB648474 D04, body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
- 2) Per KDB941225 D01, 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.

### UMTS Notes:

Per KDB941225 D01, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.

### LTE notes:

- 1) The LTE test configurations are determined according to KDB941225 D05 SAR for LTE Devices. The general test procedures used for SAR testing can be found in Section 7.1.3.
- 2) A-MPR was disabled for all SAR test by setting NS\_01 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

**WLAN Notes:**

1. For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode, 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 the reported SAR of the initial test position is  $\leq 0.4$  W/kg, further SAR measurement is not required for the other (remaining) test positions. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is  $\leq 0.8$  W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 for 2.4GHz WIFI single transmission chain operations, the highest measured maximum output power Channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4GHz 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 7.1.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 for 5GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed power. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2W/kg. See Section 7.1.5 for more information.

## 7.2.1 SAR MEASUREMENT RESULT OF HEAD

### 1. Head SAR test results of GSM

| Test No. | Band     | Mode | Channel | Test Position | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|----------|------|---------|---------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| G01      | GSM 850  | GSM  | 190     | Right Cheek   | Down | 1       | 33.5                  | 32.51                 | -0.1             | 0.153         | 0.117          | 0.192           |
| G02      | GSM 850  | GSM  | 190     | Right Tilted  | Down | 1       | 33.5                  | 32.51                 | 0.02             | 0.097         | 0.088          | 0.122           |
| G03      | GSM 850  | GSM  | 190     | Left Cheek    | Down | 1       | 33.5                  | 32.51                 | -0.09            | 0.139         | 0.107          | 0.175           |
| G04      | GSM 850  | GSM  | 190     | Left Tilted   | Down | 1       | 33.5                  | 32.51                 | 0.12             | 0.103         | 0.088          | 0.129           |
| G05      | GSM 850  | GSM  | 190     | Right Cheek   | Down | 2       | 33.5                  | 32.51                 | 0.06             | 0.144         | 0.102          | 0.181           |
| G06      | GSM 850  | GSM  | 190     | Right Cheek   | Down | 3       | 33.5                  | 32.51                 | -0.02            | <b>0.164</b>  | <b>0.126</b>   | <b>0.206</b>    |
| G07      | GSM 850  | GSM  | 190     | Right Cheek   | Down | 4       | 33.5                  | 32.51                 | 0.04             | 0.157         | 0.119          | 0.197           |
| G09      | GSM 850  | GSM  | 190     | Right Cheek   | Up   | 1       | 32.5                  | 31.67                 | 0.02             | 0.367         | 0.219          | 0.444           |
| G10      | GSM 850  | GSM  | 190     | Right Tilted  | Up   | 1       | 32.5                  | 31.67                 | 0.01             | 0.225         | 0.136          | 0.272           |
| G11      | GSM 850  | GSM  | 190     | Left Cheek    | Up   | 1       | 32.5                  | 31.67                 | -0.06            | 0.253         | 0.169          | 0.306           |
| G12      | GSM 850  | GSM  | 190     | Left Tilted   | Up   | 1       | 32.5                  | 31.67                 | 0.09             | 0.188         | 0.116          | 0.228           |
| G13      | GSM 850  | GSM  | 190     | Right Cheek   | Up   | 2       | 32.5                  | 31.67                 | 0.03             | 0.357         | 0.201          | 0.432           |
| G14      | GSM 850  | GSM  | 190     | Right Cheek   | Up   | 3       | 32.5                  | 31.67                 | -0.14            | <b>0.396</b>  | <b>0.240</b>   | <b>0.479</b>    |
| G15      | GSM 850  | GSM  | 190     | Right Cheek   | Up   | 4       | 32.5                  | 31.67                 | 0.04             | 0.361         | 0.215          | 0.437           |
| G17      | GSM 1900 | GSM  | 661     | Right Cheek   | Down | 1       | 30.5                  | 29.06                 | 0.01             | <b>0.059</b>  | <b>0.035</b>   | <b>0.082</b>    |
| G18      | GSM 1900 | GSM  | 661     | Right Tilted  | Down | 1       | 30.5                  | 29.06                 | 0.03             | 0.031         | 0.017          | 0.043           |
| G19      | GSM 1900 | GSM  | 661     | Left Cheek    | Down | 1       | 30.5                  | 29.06                 | 0.04             | 0.057         | 0.035          | 0.079           |
| G20      | GSM 1900 | GSM  | 661     | Left Tilted   | Down | 1       | 30.5                  | 29.06                 | -0.02            | 0.039         | 0.023          | 0.054           |
| G21      | GSM 1900 | GSM  | 661     | Right Cheek   | Down | 2       | 30.5                  | 29.06                 | 0.06             | 0.050         | 0.236          | 0.070           |
| G22      | GSM 1900 | GSM  | 661     | Right Cheek   | Down | 3       | 30.5                  | 29.06                 | 0.09             | 0.052         | 0.031          | 0.072           |
| G23      | GSM 1900 | GSM  | 661     | Right Cheek   | Down | 4       | 30.5                  | 29.06                 | 0.02             | 0.051         | 0.032          | 0.071           |
| G25      | GSM 1900 | GSM  | 661     | Right Cheek   | Up   | 1       | 26                    | 25.54                 | 0.09             | 0.359         | 0.183          | 0.399           |
| G26      | GSM 1900 | GSM  | 661     | Right Tilted  | Up   | 1       | 26                    | 25.54                 | 0.02             | 0.442         | 0.205          | 0.491           |
| G27      | GSM 1900 | GSM  | 661     | Left Cheek    | Up   | 1       | 26                    | 25.54                 | 0.03             | 0.253         | 0.143          | 0.281           |
| G28      | GSM 1900 | GSM  | 661     | Left Tilted   | Up   | 1       | 26                    | 25.54                 | -0.01            | 0.311         | 0.163          | 0.346           |
| G29      | GSM 1900 | GSM  | 661     | Right Tilted  | Up   | 2       | 26                    | 25.54                 | -0.08            | 0.389         | 0.198          | 0.432           |
| G30      | GSM 1900 | GSM  | 661     | Right Tilted  | Up   | 3       | 26                    | 25.54                 | 0.07             | 0.458         | 0.211          | 0.509           |
| G31      | GSM 1900 | GSM  | 661     | Right Tilted  | Up   | 4       | 26                    | 25.54                 | 0.05             | <b>0.486</b>  | <b>0.225</b>   | <b>0.540</b>    |

Note: The value with boldface is the maximum SAR Value of each test band.

## 2. Head SAR test results of UMTS

| Test No. | Band    | Mode     | Channel | Test Position | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|----------|---------|---------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| U01      | UMTS B2 | RMC12.2K | 9400    | Right Cheek   | Down | 1       | 24                    | 22.91                 | 0.01             | <b>0.134</b>  | <b>0.081</b>   | <b>0.172</b>    |
| U02      | UMTS B2 | RMC12.2K | 9400    | Right Tilted  | Down | 1       | 24                    | 22.91                 | 0.05             | 0.085         | 0.047          | 0.109           |
| U03      | UMTS B2 | RMC12.2K | 9400    | Left Cheek    | Down | 1       | 24                    | 22.91                 | 0.02             | 0.120         | 0.073          | 0.154           |
| U04      | UMTS B2 | RMC12.2K | 9400    | Left Tilted   | Down | 1       | 24                    | 22.91                 | -0.06            | 0.110         | 0.067          | 0.141           |
| U05      | UMTS B2 | RMC12.2K | 9400    | Right Cheek   | Down | 2       | 24                    | 22.91                 | 0.12             | 0.105         | 0.068          | 0.135           |
| U06      | UMTS B2 | RMC12.2K | 9400    | Right Cheek   | Down | 3       | 24                    | 22.91                 | 0.01             | 0.119         | 0.071          | 0.153           |
| U07      | UMTS B2 | RMC12.2K | 9400    | Right Cheek   | Down | 4       | 24                    | 22.91                 | 0.08             | 0.115         | 0.069          | 0.148           |
| U09      | UMTS B2 | RMC12.2K | 9400    | Right Cheek   | Up   | 1       | 17                    | 16.18                 | 0.05             | 0.455         | 0.229          | 0.550           |
| U10      | UMTS B2 | RMC12.2K | 9400    | Right Tilted  | Up   | 1       | 17                    | 16.18                 | 0.14             | 0.480         | 0.226          | 0.580           |
| U11      | UMTS B2 | RMC12.2K | 9400    | Left Cheek    | Up   | 1       | 17                    | 16.18                 | 0.02             | 0.281         | 0.169          | 0.339           |
| U12      | UMTS B2 | RMC12.2K | 9400    | Left Tilted   | Up   | 1       | 17                    | 16.18                 | -0.09            | 0.377         | 0.200          | 0.455           |
| U13      | UMTS B2 | RMC12.2K | 9400    | Right Tilted  | Up   | 2       | 17                    | 16.18                 | 0.05             | 0.512         | 0.214          | 0.618           |
| U14      | UMTS B2 | RMC12.2K | 9400    | Right Tilted  | Up   | 3       | 17                    | 16.18                 | -0.11            | 0.523         | 0.245          | 0.632           |
| U15      | UMTS B2 | RMC12.2K | 9400    | Right Tilted  | Up   | 4       | 17                    | 16.18                 | 0.03             | <b>0.542</b>  | <b>0.251</b>   | <b>0.655</b>    |
| U17      | UMTS B4 | RMC12.2K | 1413    | Right Cheek   | Down | 1       | 24                    | 22.77                 | -0.01            | <b>0.095</b>  | <b>0.060</b>   | <b>0.126</b>    |
| U18      | UMTS B4 | RMC12.2K | 1413    | Right Tilted  | Down | 1       | 24                    | 22.77                 | 0.02             | 0.059         | 0.055          | 0.078           |
| U19      | UMTS B4 | RMC12.2K | 1413    | Left Cheek    | Down | 1       | 24                    | 22.77                 | 0.04             | 0.085         | 0.051          | 0.113           |
| U20      | UMTS B4 | RMC12.2K | 1413    | Left Tilted   | Down | 1       | 24                    | 22.77                 | -0.03            | 0.061         | 0.057          | 0.081           |
| U21      | UMTS B4 | RMC12.2K | 1413    | Right Cheek   | Down | 2       | 24                    | 22.77                 | 0.09             | 0.080         | 0.042          | 0.106           |
| U22      | UMTS B4 | RMC12.2K | 1413    | Right Cheek   | Down | 3       | 24                    | 22.77                 | 0.12             | 0.081         | 0.050          | 0.108           |
| U23      | UMTS B4 | RMC12.2K | 1413    | Right Cheek   | Down | 4       | 24                    | 22.77                 | 0.01             | 0.089         | 0.055          | 0.118           |
| U25      | UMTS B4 | RMC12.2K | 1413    | Right Cheek   | Up   | 1       | 19                    | 18.1                  | 0.09             | 0.506         | 0.263          | 0.623           |
| U26      | UMTS B4 | RMC12.2K | 1413    | Right Tilted  | Up   | 1       | 19                    | 18.1                  | -0.07            | 0.562         | 0.268          | 0.691           |
| U27      | UMTS B4 | RMC12.2K | 1413    | Left Cheek    | Up   | 1       | 19                    | 18.1                  | 0.02             | 0.346         | 0.199          | 0.426           |
| U28      | UMTS B4 | RMC12.2K | 1413    | Left Tilted   | Up   | 1       | 19                    | 18.1                  | 0.05             | 0.375         | 0.206          | 0.461           |
| U29      | UMTS B4 | RMC12.2K | 1413    | Right Tilted  | Up   | 2       | 19                    | 18.1                  | -0.01            | 0.578         | 0.278          | 0.711           |
| U30      | UMTS B4 | RMC12.2K | 1413    | Right Tilted  | Up   | 3       | 19                    | 18.1                  | 0.08             | <b>0.625</b>  | <b>0.297</b>   | <b>0.769</b>    |
| U31      | UMTS B4 | RMC12.2K | 1413    | Right Tilted  | Up   | 4       | 19                    | 18.1                  | 0.12             | 0.615         | 0.283          | 0.757           |
| U33      | UMTS B5 | RMC12.2K | 4182    | Right Cheek   | Down | 1       | 24                    | 22.62                 | 0.12             | 0.144         | 0.110          | 0.198           |
| U34      | UMTS B5 | RMC12.2K | 4182    | Right Tilted  | Down | 1       | 24                    | 22.62                 | 0.01             | 0.087         | 0.068          | 0.120           |
| U35      | UMTS B5 | RMC12.2K | 4182    | Left Cheek    | Down | 1       | 24                    | 22.62                 | -0.08            | 0.125         | 0.096          | 0.172           |
| U36      | UMTS B5 | RMC12.2K | 4182    | Left Tilted   | Down | 1       | 24                    | 22.62                 | 0.03             | 0.095         | 0.066          | 0.131           |
| U37      | UMTS B5 | RMC12.2K | 4182    | Right Cheek   | Down | 2       | 24                    | 22.62                 | 0.15             | <b>0.157</b>  | <b>0.121</b>   | <b>0.216</b>    |
| U38      | UMTS B5 | RMC12.2K | 4182    | Right Cheek   | Down | 3       | 24                    | 22.62                 | 0.01             | 0.149         | 0.116          | 0.205           |
| U39      | UMTS B5 | RMC12.2K | 4182    | Right Cheek   | Down | 4       | 24                    | 22.62                 | 0.12             | 0.150         | 0.106          | 0.206           |
| U41      | UMTS B5 | RMC12.2K | 4182    | Right Cheek   | Up   | 1       | 24                    | 22.87                 | 0.05             | <b>0.521</b>  | <b>0.295</b>   | <b>0.676</b>    |
| U42      | UMTS B5 | RMC12.2K | 4182    | Right Tilted  | Up   | 1       | 24                    | 22.87                 | 0.02             | 0.414         | 0.225          | 0.537           |
| U43      | UMTS B5 | RMC12.2K | 4182    | Left Cheek    | Up   | 1       | 24                    | 22.87                 | -0.08            | 0.284         | 0.192          | 0.368           |
| U44      | UMTS B5 | RMC12.2K | 4182    | Left Tilted   | Up   | 1       | 24                    | 22.87                 | 0.1              | 0.319         | 0.178          | 0.414           |
| U45      | UMTS B5 | RMC12.2K | 4182    | Right Cheek   | Up   | 2       | 24                    | 22.87                 | -0.06            | 0.491         | 0.286          | 0.637           |
| U46      | UMTS B5 | RMC12.2K | 4182    | Right Cheek   | Up   | 3       | 24                    | 22.87                 | 0.08             | 0.495         | 0.286          | 0.642           |
| U47      | UMTS B5 | RMC12.2K | 4182    | Right Cheek   | Up   | 4       | 24                    | 22.87                 | 0.03             | 0.507         | 0.290          | 0.658           |

Note: The value with boldface is the maximum SAR Value of each test band.

### 3. Head SAR test results of LTE

| Test No. | Band   | Mode    | Channel | RB | offset | Test Position | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|--------|---------|---------|----|--------|---------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L01      | LTE B2 | QPSK20M | 18700   | 1  | 50     | Right Cheek   | Down | 1       | 24                    | 23.23                 | -0.01            | 0.124         | 0.078          | 0.148           |
| L02      | LTE B2 | QPSK20M | 18700   | 1  | 50     | Right Tilted  | Down | 1       | 24                    | 23.23                 | -0.06            | 0.092         | 0.041          | 0.110           |
| L03      | LTE B2 | QPSK20M | 18700   | 1  | 50     | Left Cheek    | Down | 1       | 24                    | 23.23                 | 0.02             | 0.111         | 0.054          | 0.133           |
| L04      | LTE B2 | QPSK20M | 18700   | 1  | 50     | Left Tilted   | Down | 1       | 24                    | 23.23                 | 0.09             | 0.094         | 0.045          | 0.113           |
| L05      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Cheek   | Down | 1       | 23                    | 22.07                 | 0.11             | <b>0.121</b>  | <b>0.075</b>   | <b>0.150</b>    |
| L06      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Tilted  | Down | 1       | 23                    | 22.07                 | 0.06             | 0.094         | 0.043          | 0.117           |
| L07      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Left Cheek    | Down | 1       | 23                    | 22.07                 | -0.03            | 0.106         | 0.052          | 0.131           |
| L08      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Left Tilted   | Down | 1       | 23                    | 22.07                 | 0.05             | 0.097         | 0.047          | 0.120           |
| L09      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Cheek   | Down | 2       | 23                    | 22.07                 | -0.12            | 0.106         | 0.061          | 0.131           |
| L10      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Cheek   | Down | 3       | 23                    | 22.07                 | 0.2              | 0.118         | 0.073          | 0.146           |
| L11      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Cheek   | Down | 4       | 23                    | 22.07                 | 0.03             | 0.112         | 0.065          | 0.139           |
| L13      | LTE B2 | QPSK20M | 18700   | 1  | 50     | Right Cheek   | Up   | 1       | 17                    | 16.82                 | 0.02             | 0.486         | 0.234          | 0.507           |
| L14      | LTE B2 | QPSK20M | 18700   | 1  | 50     | Right Tilted  | Up   | 1       | 17                    | 16.82                 | -0.08            | 0.485         | 0.232          | 0.506           |
| L15      | LTE B2 | QPSK20M | 18700   | 1  | 50     | Left Cheek    | Up   | 1       | 17                    | 16.82                 | 0.06             | 0.348         | 0.181          | 0.363           |
| L16      | LTE B2 | QPSK20M | 18700   | 1  | 50     | Left Tilted   | Up   | 1       | 17                    | 16.82                 | 0.04             | 0.421         | 0.206          | 0.439           |
| L17      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Cheek   | Up   | 1       | 17                    | 16.47                 | -0.03            | 0.487         | 0.234          | 0.551           |
| L18      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Tilted  | Up   | 1       | 17                    | 16.47                 | 0.07             | 0.510         | 0.239          | 0.577           |
| L19      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Left Cheek    | Up   | 1       | 17                    | 16.47                 | 0.01             | 0.338         | 0.185          | 0.382           |
| L20      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Left Tilted   | Up   | 1       | 17                    | 16.47                 | 0.09             | 0.400         | 0.193          | 0.452           |
| L21      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Tilted  | Up   | 2       | 17                    | 16.47                 | 0.11             | <b>0.604</b>  | <b>0.278</b>   | <b>0.683</b>    |
| L22      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Tilted  | Up   | 3       | 17                    | 16.47                 | -0.03            | 0.568         | 0.241          | 0.642           |
| L23      | LTE B2 | QPSK20M | 19100   | 50 | 25     | Right Tilted  | Up   | 4       | 17                    | 16.47                 | -0.12            | 0.562         | 0.256          | 0.635           |
| L25      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Right Cheek   | Down | 1       | 24                    | 23.14                 | -0.08            | <b>0.097</b>  | <b>0.061</b>   | <b>0.119</b>    |
| L26      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Right Tilted  | Down | 1       | 24                    | 23.14                 | 0.05             | 0.067         | 0.041          | 0.081           |
| L27      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Left Cheek    | Down | 1       | 24                    | 23.14                 | -0.01            | 0.085         | 0.055          | 0.104           |
| L28      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Left Tilted   | Down | 1       | 24                    | 23.14                 | 0.12             | 0.077         | 0.046          | 0.094           |
| L29      | LTE B4 | QPSK20M | 20175   | 50 | 0      | Right Cheek   | Down | 1       | 23                    | 21.93                 | 0.01             | 0.075         | 0.047          | 0.095           |
| L30      | LTE B4 | QPSK20M | 20175   | 50 | 0      | Right Tilted  | Down | 1       | 23                    | 21.93                 | 0.09             | 0.059         | 0.036          | 0.075           |
| L31      | LTE B4 | QPSK20M | 20175   | 50 | 0      | Left Cheek    | Down | 1       | 23                    | 21.93                 | -0.16            | 0.069         | 0.045          | 0.089           |
| L32      | LTE B4 | QPSK20M | 20175   | 50 | 0      | Left Tilted   | Down | 1       | 23                    | 21.93                 | 0.1              | 0.063         | 0.038          | 0.080           |
| L33      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Right Cheek   | Down | 2       | 24                    | 23.14                 | 0.09             | 0.081         | 0.041          | 0.099           |
| L34      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Right Cheek   | Down | 3       | 24                    | 23.14                 | 0.06             | 0.089         | 0.056          | 0.109           |
| L35      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Right Cheek   | Down | 4       | 24                    | 23.14                 | 0.07             | 0.079         | 0.050          | 0.096           |
| L37      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Right Cheek   | Up   | 1       | 18                    | 17.86                 | 0.05             | 0.389         | 0.200          | 0.402           |
| L38      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Right Tilted  | Up   | 1       | 18                    | 17.86                 | 0.14             | 0.437         | 0.209          | 0.451           |
| L39      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Left Cheek    | Up   | 1       | 18                    | 17.86                 | 0.02             | 0.322         | 0.171          | 0.332           |
| L40      | LTE B4 | QPSK20M | 20050   | 1  | 50     | Left Tilted   | Up   | 1       | 18                    | 17.86                 | -0.01            | 0.378         | 0.195          | 0.390           |
| L41      | LTE B4 | QPSK20M | 20175   | 50 | 25     | Right Cheek   | Up   | 1       | 18                    | 17.33                 | -0.11            | 0.449         | 0.214          | 0.524           |
| L42      | LTE B4 | QPSK20M | 20175   | 50 | 25     | Right Tilted  | Up   | 1       | 18                    | 17.33                 | 0.06             | 0.464         | 0.221          | 0.541           |
| L43      | LTE B4 | QPSK20M | 20175   | 50 | 25     | Left Cheek    | Up   | 1       | 18                    | 17.33                 | 0.09             | 0.320         | 0.172          | 0.373           |
| L44      | LTE B4 | QPSK20M | 20175   | 50 | 25     | Left Tilted   | Up   | 1       | 18                    | 17.33                 | 0.04             | 0.417         | 0.207          | 0.486           |
| L45      | LTE B4 | QPSK20M | 20175   | 50 | 25     | Right Tilted  | Up   | 2       | 18                    | 17.33                 | 0.01             | 0.459         | 0.205          | 0.535           |
| L46      | LTE B4 | QPSK20M | 20175   | 50 | 25     | Right Tilted  | Up   | 3       | 18                    | 17.33                 | 0.06             | <b>0.515</b>  | <b>0.244</b>   | <b>0.601</b>    |
| L47      | LTE B4 | QPSK20M | 20175   | 50 | 25     | Right Tilted  | Up   | 4       | 18                    | 17.33                 | -0.08            | 0.501         | 0.239          | 0.584           |

| Test No. | Band   | Mode    | Channel | RB | offset | Test Position | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|--------|---------|---------|----|--------|---------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L49      | LTE B5 | QPSK10M | 20525   | 1  | 25     | Right Cheek   | Down | 1       | 24                    | 23.15                 | -0.03            | 0.150         | 0.116          | 0.183           |
| L50      | LTE B5 | QPSK10M | 20525   | 1  | 25     | Right Tilted  | Down | 1       | 24                    | 23.15                 | 0                | 0.092         | 0.075          | 0.112           |
| L51      | LTE B5 | QPSK10M | 20525   | 1  | 25     | Left Cheek    | Down | 1       | 24                    | 23.15                 | -0.02            | 0.144         | 0.109          | 0.175           |
| L52      | LTE B5 | QPSK10M | 20525   | 1  | 25     | Left Tilted   | Down | 1       | 24                    | 23.15                 | 0.01             | 0.095         | 0.071          | 0.116           |
| L53      | LTE B5 | QPSK10M | 20525   | 25 | 12     | Right Cheek   | Down | 1       | 23                    | 22.08                 | 0.06             | 0.115         | 0.095          | 0.142           |
| L54      | LTE B5 | QPSK10M | 20525   | 25 | 12     | Right Tilted  | Down | 1       | 23                    | 22.08                 | -0.01            | 0.073         | 0.061          | 0.090           |
| L55      | LTE B5 | QPSK10M | 20525   | 25 | 12     | Left Cheek    | Down | 1       | 23                    | 22.08                 | 0.09             | 0.113         | 0.085          | 0.140           |
| L56      | LTE B5 | QPSK10M | 20525   | 25 | 12     | Left Tilted   | Down | 1       | 23                    | 22.08                 | 0.17             | 0.079         | 0.058          | 0.097           |
| L57      | LTE B5 | QPSK10M | 20525   | 1  | 25     | Right Cheek   | Down | 2       | 24                    | 23.15                 | 0.07             | <b>0.157</b>  | <b>0.122</b>   | <b>0.191</b>    |
| L58      | LTE B5 | QPSK10M | 20525   | 1  | 25     | Right Cheek   | Down | 3       | 24                    | 23.15                 | 0.11             | 0.148         | 0.114          | 0.180           |
| L59      | LTE B5 | QPSK10M | 20525   | 1  | 25     | Right Cheek   | Down | 4       | 24                    | 23.15                 | 0.17             | 0.130         | 0.101          | 0.158           |
| L61      | LTE B5 | QPSK10M | 20525   | 1  | 24     | Right Cheek   | Up   | 1       | 24                    | 23.45                 | 0.08             | 0.543         | 0.321          | 0.617           |
| L62      | LTE B5 | QPSK10M | 20525   | 1  | 24     | Right Tilted  | Up   | 1       | 24                    | 23.45                 | 0.01             | 0.413         | 0.256          | 0.469           |
| L63      | LTE B5 | QPSK10M | 20525   | 1  | 24     | Left Cheek    | Up   | 1       | 24                    | 23.45                 | -0.03            | 0.321         | 0.215          | 0.365           |
| L64      | LTE B5 | QPSK10M | 20525   | 1  | 24     | Left Tilted   | Up   | 1       | 24                    | 23.45                 | 0.01             | 0.298         | 0.201          | 0.338           |
| L65      | LTE B5 | QPSK10M | 20600   | 25 | 0      | Right Cheek   | Up   | 1       | 23                    | 22.34                 | -0.03            | 0.499         | 0.285          | 0.581           |
| L66      | LTE B5 | QPSK10M | 20600   | 25 | 0      | Right Tilted  | Up   | 1       | 23                    | 22.34                 | 0.18             | 0.359         | 0.226          | 0.418           |
| L67      | LTE B5 | QPSK10M | 20600   | 25 | 0      | Left Cheek    | Up   | 1       | 23                    | 22.34                 | 0.05             | 0.405         | 0.280          | 0.472           |
| L68      | LTE B5 | QPSK10M | 20600   | 25 | 0      | Left Tilted   | Up   | 1       | 23                    | 22.34                 | -0.07            | 0.329         | 0.212          | 0.383           |
| L69      | LTE B5 | QPSK10M | 20525   | 1  | 24     | Right Cheek   | Up   | 2       | 24                    | 23.45                 | 0.06             | <b>0.689</b>  | <b>0.402</b>   | <b>0.782</b>    |
| L70      | LTE B5 | QPSK10M | 20525   | 1  | 24     | Right Cheek   | Up   | 3       | 24                    | 23.45                 | 0.02             | 0.501         | 0.335          | 0.569           |
| L71      | LTE B5 | QPSK10M | 20525   | 1  | 24     | Right Cheek   | Up   | 4       | 24                    | 23.45                 | 0                | 0.520         | 0.338          | 0.591           |
| L73      | LTE B7 | QPSK20M | 20850   | 1  | 50     | Right Cheek   | Down | 1       | 24                    | 23.09                 | 0.01             | 0.086         | 0.041          | 0.105           |
| L74      | LTE B7 | QPSK20M | 20850   | 1  | 50     | Right Tilted  | Down | 1       | 24                    | 23.09                 | 0.05             | 0.046         | 0.024          | 0.056           |
| L75      | LTE B7 | QPSK20M | 20850   | 1  | 50     | Left Cheek    | Down | 1       | 24                    | 23.09                 | 0.18             | <b>0.116</b>  | <b>0.061</b>   | <b>0.143</b>    |
| L76      | LTE B7 | QPSK20M | 20850   | 1  | 50     | Left Tilted   | Down | 1       | 24                    | 23.09                 | -0.12            | 0.088         | 0.044          | 0.109           |
| L77      | LTE B7 | QPSK20M | 20850   | 50 | 25     | Right Cheek   | Down | 1       | 23                    | 22.06                 | 0.06             | 0.056         | 0.031          | 0.069           |
| L78      | LTE B7 | QPSK20M | 20850   | 50 | 25     | Right Tilted  | Down | 1       | 23                    | 22.06                 | -0.02            | 0.043         | 0.022          | 0.053           |
| L79      | LTE B7 | QPSK20M | 20850   | 50 | 25     | Left Cheek    | Down | 1       | 23                    | 22.06                 | 0.05             | 0.094         | 0.048          | 0.116           |
| L80      | LTE B7 | QPSK20M | 20850   | 50 | 25     | Left Tilted   | Down | 1       | 23                    | 22.06                 | 0.03             | 0.075         | 0.037          | 0.093           |
| L81      | LTE B7 | QPSK20M | 20850   | 1  | 50     | Left Cheek    | Down | 2       | 24                    | 23.09                 | -0.06            | 0.107         | 0.558          | 0.132           |
| L82      | LTE B7 | QPSK20M | 20850   | 1  | 50     | Left Cheek    | Down | 3       | 24                    | 23.09                 | 0.15             | 0.099         | 0.542          | 0.122           |
| L83      | LTE B7 | QPSK20M | 20850   | 1  | 50     | Left Cheek    | Down | 4       | 24                    | 23.09                 | 0.03             | 0.105         | 0.055          | 0.129           |

| Test No. | Band    | Mode    | Channel | RB  | offset | Test Position           | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|-----|--------|-------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L85      | LTE B7  | QPSK20M | 20850   | 1   | 50     | Right Cheek             | Up   | 1       | 17                    | 16.82                 | 0.01             | 0.698         | 0.288          | 0.727           |
| L86      | LTE B7  | QPSK20M | 20850   | 1   | 50     | Right Tilted            | Up   | 1       | 17                    | 16.82                 | -0.14            | 0.807         | 0.321          | 0.841           |
| L87      | LTE B7  | QPSK20M | 20850   | 1   | 50     | Left Cheek              | Up   | 1       | 17                    | 16.82                 | 0.06             | 0.212         | 0.101          | 0.221           |
| L88      | LTE B7  | QPSK20M | 20850   | 1   | 50     | Left Tilted             | Up   | 1       | 17                    | 16.82                 | 0.02             | 0.335         | 0.153          | 0.349           |
| L89      | LTE B7  | QPSK20M | 20850   | 50  | 25     | Right Cheek             | Up   | 1       | 17                    | 16.46                 | 0.09             | 0.783         | 0.316          | 0.887           |
| L90      | LTE B7  | QPSK20M | 20850   | 50  | 25     | Right Tilted            | Up   | 1       | 17                    | 16.46                 | -0.03            | 0.809         | 0.325          | 0.916           |
| L91      | LTE B7  | QPSK20M | 20850   | 50  | 25     | Left Cheek              | Up   | 1       | 17                    | 16.46                 | -0.11            | 0.307         | 0.146          | 0.348           |
| L92      | LTE B7  | QPSK20M | 20850   | 50  | 25     | Left Tilted             | Up   | 1       | 17                    | 16.46                 | 0.06             | 0.368         | 0.172          | 0.417           |
| L240     | LTE B7  | QPSK20M | 21100   | 1   | 50     | Right Tilted            | Up   | 1       | 17                    | 16.71                 | 0.08             | 0.775         | 0.313          | 0.828           |
| L241     | LTE B7  | QPSK20M | 21350   | 1   | 50     | Right Tilted            | Up   | 1       | 17                    | 16.63                 | 0.02             | 0.697         | 0.282          | 0.759           |
| L242     | LTE B7  | QPSK20M | 21100   | 50  | 25     | Right Cheek             | Up   | 1       | 17                    | 16.37                 | 0.03             | 0.751         | 0.306          | 0.869           |
| L243     | LTE B7  | QPSK20M | 21350   | 50  | 25     | Right Cheek             | Up   | 1       | 17                    | 16.34                 | 0.08             | 0.702         | 0.290          | 0.817           |
| L244     | LTE B7  | QPSK20M | 21100   | 50  | 25     | Right Tilted            | Up   | 1       | 17                    | 16.37                 | 0.09             | 0.778         | 0.314          | 0.900           |
| L245     | LTE B7  | QPSK20M | 21350   | 50  | 25     | Right Tilted            | Up   | 1       | 17                    | 16.34                 | 0                | 0.702         | 0.285          | 0.817           |
| L246     | LTE B7  | QPSK20M | 20850   | 100 | 0      | Right Tilted            | Up   | 1       | 17                    | 16.43                 | 0.03             | 0.831         | 0.321          | 0.948           |
| L247     | LTE B7  | QPSK20M | 20850   | 100 | 0      | Right Cheek             | Up   | 1       | 17                    | 16.43                 | 0.04             | 0.766         | 0.310          | 0.874           |
| L248     | LTE B7  | QPSK20M | 20850   | 100 | 0      | Right Tilted            | Up   | 2       | 17                    | 16.43                 | 0.07             | 0.856         | 0.321          | 0.977           |
| L249     | LTE B7  | QPSK20M | 20850   | 100 | 0      | Right Tilted            | Up   | 3       | 17                    | 16.43                 | -0.01            | <b>0.902</b>  | <b>0.343</b>   | <b>1.029</b>    |
| L250     | LTE B7  | QPSK20M | 20850   | 100 | 0      | Right Tilted            | Up   | 4       | 17                    | 16.43                 | 0.09             | 0.899         | 0.336          | 1.026           |
| L251     | LTE B7  | QPSK20M | 20850   | 100 | 0      | Right Tilted (Repeated) | Up   | 3       | 17                    | 16.43                 | 0.09             | 0.886         | 0.302          | 1.011           |
| L97      | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Cheek             | Down | 1       | 24                    | 22.99                 | -0.06            | 0.097         | 0.077          | 0.123           |
| L98      | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Tilted            | Down | 1       | 24                    | 22.99                 | 0.03             | 0.065         | 0.050          | 0.082           |
| L99      | LTE B12 | QPSK10M | 23095   | 1   | 24     | Left Cheek              | Down | 1       | 24                    | 22.99                 | -0.04            | 0.097         | 0.076          | 0.122           |
| L100     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Left Tilted             | Down | 1       | 24                    | 22.99                 | 0.07             | 0.068         | 0.048          | 0.085           |
| L101     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Right Cheek             | Down | 1       | 23                    | 22.06                 | -0.19            | 0.075         | 0.060          | 0.093           |
| L102     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Right Tilted            | Down | 1       | 23                    | 22.06                 | 0.02             | 0.037         | 0.026          | 0.046           |
| L103     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Left Cheek              | Down | 1       | 23                    | 22.06                 | 0.03             | 0.076         | 0.051          | 0.094           |
| L104     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Left Tilted             | Down | 1       | 23                    | 22.06                 | -0.06            | 0.057         | 0.040          | 0.071           |
| L105     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Cheek             | Down | 2       | 24                    | 22.99                 | -0.14            | <b>0.101</b>  | <b>0.079</b>   | <b>0.127</b>    |
| L106     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Cheek             | Down | 3       | 24                    | 22.99                 | 0.16             | 0.098         | 0.078          | 0.123           |
| L107     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Cheek             | Down | 4       | 24                    | 22.99                 | 0.08             | 0.099         | 0.078          | 0.125           |
| L109     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Cheek             | Up   | 1       | 24                    | 23.36                 | 0.01             | <b>0.053</b>  | <b>0.029</b>   | <b>0.062</b>    |
| L110     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Tilted            | Up   | 1       | 24                    | 23.36                 | 0.17             | 0.050         | 0.030          | 0.058           |
| L111     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Left Cheek              | Up   | 1       | 24                    | 23.36                 | -0.02            | 0.033         | 0.023          | 0.038           |
| L112     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Left Tilted             | Up   | 1       | 24                    | 23.36                 | 0.01             | 0.028         | 0.019          | 0.032           |
| L113     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Right Cheek             | Up   | 1       | 23                    | 22.37                 | 0.07             | 0.048         | 0.026          | 0.055           |
| L114     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Right Tilted            | Up   | 1       | 23                    | 22.37                 | -0.05            | 0.046         | 0.023          | 0.053           |
| L115     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Left Cheek              | Up   | 1       | 23                    | 22.37                 | 0.16             | 0.029         | 0.020          | 0.033           |
| L116     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Left Tilted             | Up   | 1       | 23                    | 22.37                 | 0                | 0.024         | 0.016          | 0.028           |
| L117     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Cheek             | Up   | 2       | 24                    | 23.36                 | -0.06            | 0.049         | 0.023          | 0.057           |
| L118     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Cheek             | Up   | 3       | 24                    | 23.36                 | 0.13             | 0.053         | 0.027          | 0.061           |
| L119     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Cheek             | Up   | 4       | 24                    | 23.36                 | 0.15             | 0.052         | 0.024          | 0.060           |

| Test No. | Band    | Mode    | Channel | RB | offset | Test Position | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|--------|---------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L121     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Cheek   | Down | 1       | 24                    | 22.96                 | -0.01            | 0.096         | 0.076          | 0.122           |
| L122     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Tilted  | Down | 1       | 24                    | 22.96                 | 0.09             | 0.047         | 0.033          | 0.060           |
| L123     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Cheek    | Down | 1       | 24                    | 22.96                 | 0.04             | 0.094         | 0.070          | 0.120           |
| L124     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Tilted   | Down | 1       | 24                    | 22.96                 | -0.03            | 0.049         | 0.035          | 0.062           |
| L125     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Right Cheek   | Down | 1       | 23                    | 21.81                 | -0.06            | 0.074         | 0.059          | 0.098           |
| L126     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Right Tilted  | Down | 1       | 23                    | 21.81                 | 0.09             | 0.038         | 0.027          | 0.050           |
| L127     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Left Cheek    | Down | 1       | 23                    | 21.81                 | 0.04             | 0.040         | 0.031          | 0.052           |
| L128     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Left Tilted   | Down | 1       | 23                    | 21.81                 | 0.16             | 0.039         | 0.028          | 0.051           |
| L129     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Cheek   | Down | 2       | 24                    | 22.96                 | -0.09            | <b>0.103</b>  | <b>0.081</b>   | <b>0.131</b>    |
| L130     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Cheek   | Down | 3       | 24                    | 22.96                 | -0.13            | 0.097         | 0.078          | 0.123           |
| L131     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Cheek   | Down | 4       | 24                    | 22.96                 | 0.09             | 0.099         | 0.079          | 0.125           |
| L133     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Cheek   | Up   | 1       | 24                    | 23.37                 | -0.09            | <b>0.065</b>  | <b>0.035</b>   | <b>0.075</b>    |
| L134     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Tilted  | Up   | 1       | 24                    | 23.37                 | 0.13             | 0.049         | 0.030          | 0.056           |
| L135     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Cheek    | Up   | 1       | 24                    | 23.37                 | -0.08            | 0.044         | 0.029          | 0.051           |
| L136     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Tilted   | Up   | 1       | 24                    | 23.37                 | -0.08            | 0.042         | 0.027          | 0.049           |
| L137     | LTE B17 | QPSK10M | 23790   | 25 | 12     | Right Cheek   | Up   | 1       | 23                    | 22.24                 | -0.04            | 0.062         | 0.035          | 0.073           |
| L138     | LTE B17 | QPSK10M | 23790   | 25 | 12     | Right Tilted  | Up   | 1       | 23                    | 22.24                 | -0.05            | 0.048         | 0.027          | 0.057           |
| L139     | LTE B17 | QPSK10M | 23790   | 25 | 12     | Left Cheek    | Up   | 1       | 23                    | 22.24                 | 0.06             | 0.042         | 0.027          | 0.050           |
| L140     | LTE B17 | QPSK10M | 23790   | 25 | 12     | Left Tilted   | Up   | 1       | 23                    | 22.24                 | -0.13            | 0.041         | 0.026          | 0.049           |
| L141     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Cheek   | Up   | 2       | 24                    | 23.37                 | 0.06             | 0.062         | 0.035          | 0.071           |
| L142     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Cheek   | Up   | 3       | 24                    | 23.37                 | 0.05             | 0.062         | 0.034          | 0.072           |
| L143     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Cheek   | Up   | 4       | 24                    | 23.37                 | -0.01            | 0.064         | 0.035          | 0.073           |
| L145     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Right Cheek   | Down | 1       | 24                    | 23.16                 | 0.1              | <b>0.161</b>  | <b>0.123</b>   | <b>0.195</b>    |
| L146     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Right Tilted  | Down | 1       | 24                    | 23.16                 | -0.02            | 0.102         | 0.079          | 0.124           |
| L147     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Left Cheek    | Down | 1       | 24                    | 23.16                 | 0.05             | 0.137         | 0.105          | 0.166           |
| L148     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Left Tilted   | Down | 1       | 24                    | 23.16                 | 0.06             | 0.103         | 0.072          | 0.125           |
| L149     | LTE B26 | QPSK15M | 26865   | 36 | 0      | Right Cheek   | Down | 1       | 23                    | 22.07                 | 0.12             | 0.102         | 0.091          | 0.126           |
| L150     | LTE B26 | QPSK15M | 26865   | 36 | 0      | Right Tilted  | Down | 1       | 23                    | 22.07                 | 0.01             | 0.077         | 0.058          | 0.095           |
| L151     | LTE B26 | QPSK15M | 26865   | 36 | 0      | Left Cheek    | Down | 1       | 23                    | 22.07                 | -0.03            | 0.135         | 0.090          | 0.167           |
| L152     | LTE B26 | QPSK15M | 26865   | 36 | 0      | Left Tilted   | Down | 1       | 23                    | 22.07                 | 0.02             | 0.081         | 0.057          | 0.100           |
| L153     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Right Cheek   | Down | 2       | 24                    | 23.16                 | 0.09             | 0.145         | 0.105          | 0.176           |
| L154     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Right Cheek   | Down | 3       | 24                    | 23.16                 | 0.07             | 0.154         | 0.110          | 0.187           |
| L155     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Right Cheek   | Down | 4       | 24                    | 23.16                 | -0.12            | 0.142         | 0.102          | 0.172           |
| L157     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Right Cheek   | Up   | 1       | 24                    | 23.46                 | 0.03             | 0.435         | 0.259          | 0.493           |
| L158     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Right Tilted  | Up   | 1       | 24                    | 23.46                 | 0.01             | 0.307         | 0.178          | 0.348           |
| L159     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Left Cheek    | Up   | 1       | 24                    | 23.46                 | 0                | 0.325         | 0.202          | 0.368           |
| L160     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Left Tilted   | Up   | 1       | 24                    | 23.46                 | 0.14             | 0.359         | 0.205          | 0.407           |
| L161     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Right Cheek   | Up   | 1       | 23                    | 22.37                 | 0.07             | 0.462         | 0.269          | 0.534           |
| L162     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Right Tilted  | Up   | 1       | 23                    | 22.37                 | 0                | 0.283         | 0.163          | 0.327           |
| L163     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Left Cheek    | Up   | 1       | 23                    | 22.37                 | -0.1             | 0.295         | 0.183          | 0.341           |
| L164     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Left Tilted   | Up   | 1       | 23                    | 22.37                 | 0.06             | 0.263         | 0.153          | 0.304           |
| L165     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Right Cheek   | Up   | 2       | 23                    | 22.37                 | -0.18            | <b>0.560</b>  | <b>0.323</b>   | <b>0.647</b>    |
| L166     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Right Cheek   | Up   | 3       | 23                    | 22.37                 | 0.11             | 0.434         | 0.258          | 0.502           |
| L167     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Right Cheek   | Up   | 4       | 23                    | 22.37                 | 0.17             | 0.394         | 0.233          | 0.455           |

| Test No. | Band    | Mode    | Channel | RB | offset | Test Position           | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|--------|-------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L169     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Right Cheek             | Down | 1       | 23.5                  | 22.86                 | 0.02             | 0.058         | 0.033          | 0.067           |
| L170     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Right Tilted            | Down | 1       | 23.5                  | 22.86                 | -0.06            | 0.040         | 0.022          | 0.047           |
| L171     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Cheek              | Down | 1       | 23.5                  | 22.86                 | 0.04             | <b>0.106</b>  | <b>0.055</b>   | <b>0.123</b>    |
| L172     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Tilted             | Down | 1       | 23.5                  | 22.86                 | 0.01             | 0.070         | 0.033          | 0.081           |
| L173     | LTE B38 | QPSK20M | 38000   | 50 | 25     | Right Cheek             | Down | 1       | 22.5                  | 21.80                 | 0.12             | 0.046         | 0.023          | 0.054           |
| L174     | LTE B38 | QPSK20M | 38000   | 50 | 25     | Right Tilted            | Down | 1       | 22.5                  | 21.80                 | 0.03             | 0.034         | 0.018          | 0.039           |
| L175     | LTE B38 | QPSK20M | 38000   | 50 | 25     | Left Cheek              | Down | 1       | 22.5                  | 21.80                 | 0.01             | 0.085         | 0.043          | 0.100           |
| L176     | LTE B38 | QPSK20M | 38000   | 50 | 25     | Left Tilted             | Down | 1       | 22.5                  | 21.80                 | -0.04            | 0.065         | 0.033          | 0.077           |
| L177     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Cheek              | Down | 2       | 23.5                  | 22.86                 | 0.09             | 0.083         | 0.043          | 0.096           |
| L178     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Cheek              | Down | 3       | 23.5                  | 22.86                 | 0.07             | 0.095         | 0.054          | 0.111           |
| L179     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Cheek              | Down | 4       | 23.5                  | 22.86                 | 0.05             | 0.090         | 0.051          | 0.104           |
| L181     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Right Cheek             | Up   | 1       | 18.5                  | 18.46                 | 0.02             | 0.510         | 0.222          | 0.515           |
| L182     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Right Tilted            | Up   | 1       | 18.5                  | 18.46                 | 0.12             | 0.641         | 0.259          | 0.647           |
| L183     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Cheek              | Up   | 1       | 18.5                  | 18.46                 | 0.01             | 0.206         | 0.099          | 0.208           |
| L184     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Tilted             | Up   | 1       | 18.5                  | 18.46                 | -0.03            | 0.285         | 0.129          | 0.288           |
| L185     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Right Cheek             | Up   | 1       | 18.5                  | 18.05                 | 0.05             | 0.506         | 0.212          | 0.562           |
| L186     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Right Tilted            | Up   | 1       | 18.5                  | 18.05                 | 0.01             | 0.674         | 0.265          | 0.748           |
| L187     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Left Cheek              | Up   | 1       | 18.5                  | 18.05                 | -0.09            | 0.211         | 0.093          | 0.234           |
| L188     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Left Tilted             | Up   | 1       | 18.5                  | 18.05                 | 0.04             | 0.281         | 0.129          | 0.312           |
| L192     | LTE B38 | QPSK20M | 38000   | 50 | 0      | Right Tilted            | Up   | 2       | 18.5                  | 17.99                 | 0.01             | 0.689         | 0.215          | 0.774           |
| L193     | LTE B38 | QPSK20M | 38000   | 50 | 0      | Right Tilted            | Up   | 3       | 18.5                  | 17.99                 | -0.09            | 0.704         | 0.248          | 0.791           |
| L194     | LTE B38 | QPSK20M | 38000   | 50 | 0      | Right Tilted            | Up   | 4       | 18.5                  | 17.99                 | 0.04             | <b>0.710</b>  | <b>0.267</b>   | <b>0.798</b>    |
| L195     | LTE B38 | QPSK20M | 38000   | 50 | 0      | Right Tilted (Repeated) | Up   | 4       | 18.5                  | 17.99                 | 0.09             | 0.706         | 0.261          | 0.793           |
| L201     | LTE B41 | QPSK20M | 40840   | 1  | 50     | Right Cheek             | Down | 1       | 23.5                  | 22.93                 | 0.05             | 0.075         | 0.033          | 0.085           |
| L202     | LTE B41 | QPSK20M | 40840   | 1  | 50     | Right Tilted            | Down | 1       | 23.5                  | 22.93                 | -0.02            | 0.055         | 0.029          | 0.063           |
| L203     | LTE B41 | QPSK20M | 40840   | 1  | 50     | Left Cheek              | Down | 1       | 23.5                  | 22.93                 | 0.05             | <b>0.141</b>  | <b>0.071</b>   | <b>0.161</b>    |
| L204     | LTE B41 | QPSK20M | 40840   | 1  | 50     | Left Tilted             | Down | 1       | 23.5                  | 22.93                 | 0.03             | 0.093         | 0.046          | 0.106           |
| L205     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Right Cheek             | Down | 1       | 22.5                  | 21.88                 | 0.01             | 0.052         | 0.023          | 0.060           |
| L206     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Right Tilted            | Down | 1       | 22.5                  | 21.88                 | 0.07             | 0.040         | 0.020          | 0.046           |
| L207     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Left Cheek              | Down | 1       | 22.5                  | 21.88                 | 0.08             | 0.085         | 0.043          | 0.098           |
| L208     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Left Tilted             | Down | 1       | 22.5                  | 21.88                 | 0.12             | 0.061         | 0.030          | 0.070           |
| L209     | LTE B41 | QPSK20M | 40840   | 1  | 50     | Left Cheek              | Down | 2       | 23.5                  | 22.93                 | -0.06            | 0.095         | 0.031          | 0.109           |
| L210     | LTE B41 | QPSK20M | 40840   | 1  | 50     | Left Cheek              | Down | 3       | 23.5                  | 22.93                 | 0.01             | 0.102         | 0.046          | 0.116           |
| L211     | LTE B41 | QPSK20M | 40840   | 1  | 50     | Left Cheek              | Down | 4       | 23.5                  | 22.93                 | 0.09             | 0.116         | 0.059          | 0.132           |
| L220     | LTE B41 | QPSK20M | 40140   | 1  | 50     | Right Cheek             | Up   | 1       | 18.5                  | 18.44                 | -0.02            | 0.570         | 0.241          | 0.578           |
| L221     | LTE B41 | QPSK20M | 40140   | 1  | 50     | Right Tilted            | Up   | 1       | 18.5                  | 18.44                 | 0.19             | 0.682         | 0.269          | 0.691           |
| L222     | LTE B41 | QPSK20M | 40140   | 1  | 50     | Left Cheek              | Up   | 1       | 18.5                  | 18.44                 | 0.03             | 0.207         | 0.100          | 0.210           |
| L223     | LTE B41 | QPSK20M | 40140   | 1  | 50     | Left Tilted             | Up   | 1       | 18.5                  | 18.44                 | 0.09             | 0.261         | 0.124          | 0.265           |
| L224     | LTE B41 | QPSK20M | 40140   | 50 | 50     | Right Cheek             | Up   | 1       | 18.5                  | 18.07                 | -0.05            | 0.550         | 0.233          | 0.607           |
| L225     | LTE B41 | QPSK20M | 40140   | 50 | 50     | Right Tilted            | Up   | 1       | 18.5                  | 18.07                 | 0.03             | <b>0.659</b>  | <b>0.259</b>   | <b>0.728</b>    |
| L226     | LTE B41 | QPSK20M | 40140   | 50 | 50     | Left Cheek              | Up   | 1       | 18.5                  | 18.07                 | 0.12             | 0.218         | 0.101          | 0.241           |
| L227     | LTE B41 | QPSK20M | 40140   | 50 | 50     | Left Tilted             | Up   | 1       | 18.5                  | 18.07                 | -0.03            | 0.257         | 0.127          | 0.284           |
| L228     | LTE B41 | QPSK20M | 40140   | 50 | 50     | Right Tilted            | Up   | 2       | 18.5                  | 18.07                 | 0.09             | 0.623         | 0.246          | 0.688           |
| L229     | LTE B41 | QPSK20M | 40140   | 50 | 50     | Right Tilted            | Up   | 3       | 18.5                  | 18.07                 | 0                | 0.658         | 0.257          | 0.727           |
| L230     | LTE B41 | QPSK20M | 40140   | 50 | 50     | Right Tilted            | Up   | 4       | 18.5                  | 18.07                 | 0.07             | 0.645         | 0.244          | 0.712           |

| Test No. | Band    | Mode    | Channel | RB  | offset | Test Position           | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|-----|--------|-------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L240     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Right Cheek             | Down | 1       | 24                    | 23.17                 | 0.05             | <b>0.094</b>  | <b>0.059</b>   | <b>0.114</b>    |
| L241     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Right Tilted            | Down | 1       | 24                    | 23.17                 | 0.03             | 0.073         | 0.045          | 0.089           |
| L242     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Left Cheek              | Down | 1       | 24                    | 23.17                 | -0.06            | 0.083         | 0.053          | 0.100           |
| L243     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Left Tilted             | Down | 1       | 24                    | 23.17                 | 0.07             | 0.080         | 0.050          | 0.097           |
| L244     | LTE B66 | QPSK20M | 132272  | 50  | 25     | Right Cheek             | Down | 1       | 23                    | 22.00                 | 0.01             | 0.079         | 0.049          | 0.099           |
| L245     | LTE B66 | QPSK20M | 132272  | 50  | 25     | Right Tilted            | Down | 1       | 23                    | 22.00                 | -0.12            | 0.060         | 0.035          | 0.075           |
| L246     | LTE B66 | QPSK20M | 132272  | 50  | 25     | Left Cheek              | Down | 1       | 23                    | 22.00                 | 0.05             | 0.082         | 0.052          | 0.103           |
| L247     | LTE B66 | QPSK20M | 132272  | 50  | 25     | Left Tilted             | Down | 1       | 23                    | 22.00                 | 0.08             | 0.061         | 0.037          | 0.077           |
| L248     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Right Cheek             | Down | 2       | 24                    | 23.17                 | 0.01             | 0.089         | 0.054          | 0.108           |
| L249     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Right Cheek             | Down | 3       | 24                    | 23.17                 | 0.07             | 0.080         | 0.050          | 0.097           |
| L250     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Right Cheek             | Down | 4       | 24                    | 23.17                 | 0.13             | 0.082         | 0.051          | 0.099           |
| L260     | LTE B66 | QPSK20M | 132472  | 1   | 50     | Right Cheek             | Up   | 1       | 20                    | 19.87                 | 0.08             | 0.811         | 0.414          | 0.836           |
| L261     | LTE B66 | QPSK20M | 132472  | 1   | 50     | Right Tilted            | Up   | 1       | 20                    | 19.87                 | 0.15             | 0.915         | 0.436          | 0.943           |
| L262     | LTE B66 | QPSK20M | 132472  | 1   | 50     | Left Cheek              | Up   | 1       | 20                    | 19.87                 | -0.12            | 0.645         | 0.369          | 0.665           |
| L263     | LTE B66 | QPSK20M | 132472  | 1   | 50     | Left Tilted             | Up   | 1       | 20                    | 19.87                 | 0.03             | 0.765         | 0.387          | 0.789           |
| L264     | LTE B66 | QPSK20M | 132272  | 50  | 25     | Right Cheek             | Up   | 1       | 20                    | 19.75                 | 0.01             | 0.743         | 0.384          | 0.787           |
| L265     | LTE B66 | QPSK20M | 132272  | 50  | 25     | Right Tilted            | Up   | 1       | 20                    | 19.75                 | 0.03             | 0.867         | 0.414          | 0.919           |
| L266     | LTE B66 | QPSK20M | 132272  | 50  | 25     | Left Cheek              | Up   | 1       | 20                    | 19.75                 | 0.16             | 0.626         | 0.362          | 0.663           |
| L267     | LTE B66 | QPSK20M | 132272  | 50  | 25     | Left Tilted             | Up   | 1       | 20                    | 19.75                 | -0.01            | 0.753         | 0.406          | 0.798           |
| L268     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Right Cheek             | Up   | 1       | 20                    | 19.83                 | 0.02             | 0.686         | 0.350          | 0.714           |
| L269     | LTE B66 | QPSK20M | 132272  | 1   | 50     | Right Cheek             | Up   | 1       | 20                    | 19.81                 | 0.06             | 0.766         | 0.390          | 0.801           |
| L270     | LTE B66 | QPSK20M | 132072  | 1   | 50     | Right Tilted            | Up   | 1       | 20                    | 19.83                 | -0.13            | 0.851         | 0.409          | 0.885           |
| L271     | LTE B66 | QPSK20M | 132272  | 1   | 50     | Right Tilted            | Up   | 1       | 20                    | 19.81                 | 0.09             | 0.840         | 0.401          | 0.878           |
| L274     | LTE B66 | QPSK20M | 132072  | 50  | 25     | Right Tilted            | Up   | 1       | 20                    | 19.71                 | -0.06            | 0.853         | 0.409          | 0.911           |
| L275     | LTE B66 | QPSK20M | 132472  | 50  | 25     | Right Tilted            | Up   | 1       | 20                    | 19.73                 | 0.03             | <b>0.890</b>  | <b>0.423</b>   | <b>0.947</b>    |
| L276     | LTE B66 | QPSK20M | 132272  | 100 | 0      | Right Cheek             | Up   | 1       | 20                    | 19.73                 | 0.01             | 0.861         | 0.423          | 0.916           |
| L277     | LTE B66 | QPSK20M | 132272  | 100 | 0      | Right Tilted            | Up   | 1       | 20                    | 19.73                 | 0.04             | 0.827         | 0.394          | 0.880           |
| L278     | LTE B66 | QPSK20M | 132472  | 50  | 25     | Right Tilted            | Up   | 2       | 20                    | 19.73                 | 0.18             | 0.887         | 0.427          | 0.944           |
| L279     | LTE B66 | QPSK20M | 132472  | 50  | 25     | Right Tilted            | Up   | 3       | 20                    | 19.73                 | -0.01            | 0.879         | 0.423          | 0.935           |
| L280     | LTE B66 | QPSK20M | 132472  | 50  | 25     | Right Tilted            | Up   | 4       | 20                    | 19.73                 | 0.06             | 0.867         | 0.429          | 0.922           |
| L281     | LTE B66 | QPSK20M | 132472  | 50  | 25     | Right Tilted (Repeated) | Up   | 1       | 20                    | 19.73                 | 0.07             | 0.884         | 0.413          | 0.940           |

Note: The value with boldface is the maximum SAR Value of each test band.

#### 4. Head SAR test results of 2.4G WiFi

WiFi only

| Test No. | Band    | Channel | Test Position         | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|-----------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W01      | 802.11b | 6       | Right Cheek           | 1       | 1         | 18                    | 16.77                 | 0.02             | 0.522         | 0.252          | 0.693           |
| W02      | 802.11b | 6       | Right Tilted          | 1       | 1         | 18                    | 16.77                 | 0.07             | 0.495         | 0.226          | 0.657           |
| W03      | 802.11b | 6       | Left Cheek            | 1       | 1         | 18                    | 16.77                 | -0.16            | <b>0.917</b>  | <b>0.420</b>   | <b>1.217</b>    |
| W04      | 802.11b | 6       | Left Tilted           | 1       | 1         | 18                    | 16.77                 | 0.06             | 0.689         | 0.293          | 0.915           |
| W63      | 802.11b | 1       | Left Cheek            | 1       | 1         | 15                    | 14.86                 | -0.03            | 0.666         | 0.295          | 0.688           |
| W64      | 802.11b | 1       | Left Tilted           | 1       | 1         | 15                    | 14.86                 | 0.11             | 0.474         | 0.199          | 0.490           |
| W06      | 802.11b | 6       | Left Cheek            | 2       | 1         | 18                    | 16.77                 | 0.02             | 0.845         | 0.377          | 1.122           |
| W07      | 802.11b | 6       | Left Cheek            | 3       | 1         | 18                    | 16.77                 | -0.08            | 0.805         | 0.371          | 1.069           |
| W08      | 802.11b | 6       | Left Cheek            | 4       | 1         | 18                    | 16.77                 | 0.19             | 0.817         | 0.384          | 1.084           |
| W09      | 802.11b | 6       | Left Cheek (Repeated) | 1       | 1         | 18                    | 16.77                 | -0.04            | 0.868         | 0.398          | 1.152           |

WiFi Antenna Simultaneous with 2G&3G&4G

| Test No. | Band    | Channel | Test Position | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W32      | 802.11b | 1       | Right Cheek   | 1       | 1         | 14                    | 13.75                 | 0.11             | 0.115         | 0.044          | 0.122           |
| W33      | 802.11b | 1       | Right Tilted  | 1       | 1         | 14                    | 13.75                 | -0.04            | 0.209         | 0.106          | 0.221           |
| W34      | 802.11b | 1       | Left Cheek    | 1       | 1         | 14                    | 13.75                 | 0.03             | <b>0.410</b>  | <b>0.187</b>   | <b>0.434</b>    |
| W35      | 802.11b | 1       | Left Tilted   | 1       | 1         | 14                    | 13.75                 | 0.05             | 0.336         | 0.141          | 0.356           |
| W36      | 802.11b | 1       | Left Cheek    | 2       | 1         | 14                    | 13.75                 | 0.06             | 0.389         | 0.164          | 0.412           |
| W37      | 802.11b | 1       | Left Cheek    | 3       | 1         | 14                    | 13.75                 | -0.12            | 0.402         | 0.175          | 0.426           |
| W38      | 802.11b | 1       | Left Cheek    | 4       | 1         | 14                    | 13.75                 | 0.08             | 0.376         | 0.139          | 0.398           |

Note: The value with boldface is the maximum SAR Value of each test band.

#### 5. Head SAR test results of BT

| Test No. | Band   | Channel | Test Position | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|--------|---------|---------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W90      | BT DH5 | 0       | Right Cheek   | 1       | 1         | 11                    | 10.09                 | -0.07            | 0.132         | 0.064          | 0.163           |
| W91      | BT DH5 | 0       | Right Tilted  | 1       | 1         | 11                    | 10.09                 | 0.01             | 0.137         | 0.060          | 0.169           |
| W92      | BT DH5 | 0       | Left Cheek    | 1       | 1         | 11                    | 10.09                 | 0                | 0.235         | 0.104          | 0.290           |
| W93      | BT DH5 | 0       | Left Tilted   | 1       | 1         | 11                    | 10.09                 | -0.08            | 0.194         | 0.078          | 0.239           |
| W94      | BT DH5 | 0       | Left Cheek    | 2       | 1         | 11                    | 10.09                 | 0.05             | <b>0.243</b>  | <b>0.109</b>   | <b>0.300</b>    |
| W95      | BT DH5 | 0       | Left Cheek    | 3       | 1         | 11                    | 10.09                 | 0.02             | 0.237         | 0.103          | 0.292           |
| W96      | BT DH5 | 0       | Left Cheek    | 4       | 1         | 11                    | 10.09                 | 0.1              | 0.228         | 0.099          | 0.281           |

Note: The value with boldface is the maximum SAR Value of each test band.

## 6. Head SAR test results of 5G WiFi

WiFi only

| Test No. | Band    | Channel | Test Position          | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W11      | 802.11a | 52      | Right Cheek            | 1       | 6         | 13                    | 11.71                 | 0.02             | 0.398         | 0.088          | 0.536           |
| W12      | 802.11a | 52      | Right Tilted           | 1       | 6         | 13                    | 11.71                 | -0.05            | 0.479         | 0.132          | 0.645           |
| W13      | 802.11a | 52      | Left Cheek             | 1       | 6         | 13                    | 11.71                 | 0.07             | 0.399         | 0.110          | 0.537           |
| W14      | 802.11a | 52      | Left Tilted            | 1       | 6         | 13                    | 11.71                 | 0.19             | 0.563         | 0.140          | 0.758           |
| W15      | 802.11a | 52      | Left Tilted            | 2       | 6         | 13                    | 11.71                 | 0.01             | 0.589         | 0.143          | 0.793           |
| W16      | 802.11a | 52      | Left Tilted            | 3       | 6         | 13                    | 11.71                 | 0.03             | 0.616         | 0.156          | 0.829           |
| W17      | 802.11a | 52      | Left Tilted            | 4       | 6         | 13                    | 11.71                 | -0.19            | <b>0.625</b>  | <b>0.159</b>   | <b>0.841</b>    |
| W18      | 802.11a | 52      | Left Tilted (Repeated) | 4       | 6         | 13                    | 11.71                 | -0.11            | 0.609         | 0.146          | 0.820           |
| W20      | 802.11a | 108     | Right Cheek            | 1       | 6         | 13                    | 11.79                 | -0.01            | 0.377         | 0.113          | 0.498           |
| W21      | 802.11a | 108     | Right Tilted           | 1       | 6         | 13                    | 11.79                 | 0.04             | 0.527         | 0.154          | 0.696           |
| W22      | 802.11a | 108     | Left Cheek             | 1       | 6         | 13                    | 11.79                 | -0.05            | 0.557         | 0.146          | 0.736           |
| W23      | 802.11a | 108     | Left Tilted            | 1       | 6         | 13                    | 11.79                 | -0.05            | <b>0.824</b>  | <b>0.194</b>   | <b>1.089</b>    |
| W24      | 802.11a | 104     | Left Tilted            | 1       | 6         | 13                    | 11.78                 | 0.01             | 0.806         | 0.187          | 1.067           |
| W25      | 802.11a | 108     | Left Tilted            | 2       | 6         | 13                    | 11.79                 | 0.12             | 0.802         | 0.182          | 1.060           |
| W26      | 802.11a | 108     | Left Tilted            | 3       | 6         | 13                    | 11.79                 | -0.08            | 0.779         | 0.196          | 1.029           |
| W27      | 802.11a | 108     | Left Tilted            | 4       | 6         | 13                    | 11.79                 | 0.03             | 0.781         | 0.176          | 1.032           |
| W28      | 802.11a | 108     | Left Tilted (Repeated) | 4       | 6         | 13                    | 11.79                 | 0.02             | 0.803         | 0.184          | 1.061           |
| W30      | 802.11a | 149     | Right Cheek            | 1       | 6         | 11                    | 9.89                  | 0.06             | 0.187         | 0.060          | 0.241           |
| W31      | 802.11a | 149     | Right Tilted           | 1       | 6         | 11                    | 9.89                  | -0.01            | 0.349         | 0.097          | 0.451           |
| W32      | 802.11a | 149     | Left Cheek             | 1       | 6         | 11                    | 9.89                  | 0.12             | 0.324         | 0.090          | 0.418           |
| W33      | 802.11a | 149     | Left Tilted            | 1       | 6         | 11                    | 9.89                  | -0.05            | <b>0.582</b>  | <b>0.128</b>   | <b>0.751</b>    |
| W34      | 802.11a | 149     | Left Tilted            | 2       | 6         | 11                    | 9.89                  | 0.03             | 0.531         | 0.124          | 0.686           |
| W35      | 802.11a | 149     | Left Tilted            | 3       | 6         | 11                    | 9.89                  | -0.18            | 0.524         | 0.117          | 0.677           |
| W36      | 802.11a | 149     | Left Tilted            | 4       | 6         | 11                    | 9.89                  | 0.09             | 0.563         | 0.125          | 0.727           |

## WiFi Antenna Simultaneous with 2G&amp;3G&amp;4G

| Test No. | Band    | Channel | Test Position | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W40      | 802.11a | 52      | Right Cheek   | 1       | 6         | 10                    | 9.65                  | 0.02             | 0.152         | 0.045          | 0.165           |
| W41      | 802.11a | 52      | Right Tilted  | 1       | 6         | 10                    | 9.65                  | 0.08             | 0.226         | 0.063          | 0.245           |
| W42      | 802.11a | 52      | Left Cheek    | 1       | 6         | 10                    | 9.65                  | -0.02            | 0.281         | 0.072          | 0.305           |
| W43      | 802.11a | 52      | Left Tilted   | 1       | 6         | 10                    | 9.65                  | -0.05            | <b>0.377</b>  | <b>0.089</b>   | <b>0.409</b>    |
| W44      | 802.11a | 52      | Left Tilted   | 2       | 6         | 10                    | 9.65                  | -0.06            | 0.346         | 0.079          | 0.375           |
| W45      | 802.11a | 52      | Left Tilted   | 3       | 6         | 10                    | 9.65                  | 0.11             | 0.309         | 0.068          | 0.335           |
| W46      | 802.11a | 52      | Left Tilted   | 4       | 6         | 10                    | 9.65                  | 0.07             | 0.373         | 0.076          | 0.404           |
| W48      | 802.11a | 108     | Right Cheek   | 1       | 6         | 9                     | 8.28                  | 0.01             | 0.128         | 0.037          | 0.151           |
| W49      | 802.11a | 108     | Right Tilted  | 1       | 6         | 9                     | 8.28                  | 0.01             | 0.182         | 0.042          | 0.215           |
| W50      | 802.11a | 108     | Left Cheek    | 1       | 6         | 9                     | 8.28                  | 0.16             | 0.200         | 0.053          | 0.236           |
| W51      | 802.11a | 108     | Left Tilted   | 1       | 6         | 9                     | 8.28                  | -0.05            | <b>0.396</b>  | <b>0.088</b>   | <b>0.467</b>    |
| W52      | 802.11a | 108     | Left Tilted   | 2       | 6         | 9                     | 8.28                  | 0.09             | 0.348         | 0.070          | 0.411           |
| W53      | 802.11a | 108     | Left Tilted   | 3       | 6         | 9                     | 8.28                  | -0.12            | 0.325         | 0.059          | 0.384           |
| W54      | 802.11a | 108     | Left Tilted   | 4       | 6         | 9                     | 8.28                  | 0.03             | 0.387         | 0.081          | 0.457           |
| W56      | 802.11a | 149     | Right Cheek   | 1       | 6         | 8                     | 7.84                  | -0.08            | 0.143         | 0.042          | 0.148           |
| W57      | 802.11a | 149     | Right Tilted  | 1       | 6         | 8                     | 7.84                  | 0                | 0.193         | 0.047          | 0.200           |
| W58      | 802.11a | 149     | Left Cheek    | 1       | 6         | 8                     | 7.84                  | -0.02            | 0.203         | 0.053          | 0.211           |
| W59      | 802.11a | 149     | Left Tilted   | 1       | 6         | 8                     | 7.84                  | 0.01             | <b>0.385</b>  | <b>0.082</b>   | <b>0.399</b>    |
| W60      | 802.11a | 149     | Left Tilted   | 2       | 6         | 8                     | 7.84                  | 0.07             | 0.371         | 0.071          | 0.385           |
| W61      | 802.11a | 149     | Left Tilted   | 3       | 6         | 8                     | 7.84                  | 0.08             | 0.309         | 0.046          | 0.321           |
| W62      | 802.11a | 149     | Left Tilted   | 4       | 6         | 8                     | 7.84                  | 0.14             | 0.356         | 0.065          | 0.369           |

Note: The value with boldface is the maximum SAR Value of each test band.

## 7.2.2 SAR MEASUREMENT RESULT OF BODY-WORN

### 1. Body-worn SAR test results of GSM

| Test No. | Band     | Mode | Channel | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|----------|------|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| G32      | GSM 850  | GSM  | 190     | Front Face    | 1.5                      | Down | 1       | 32.5                  | 31.75                 | -0.02            | 0.099         | 0.076          | 0.118           |
| G33      | GSM 850  | GSM  | 190     | Rear Face     | 1.5                      | Down | 1       | 32.5                  | 31.75                 | -0.03            | <b>0.149</b>  | <b>0.113</b>   | <b>0.177</b>    |
| G34      | GSM 850  | GSM  | 190     | Rear Face     | 1.5                      | Down | 2       | 32.5                  | 31.75                 | 0.01             | 0.139         | 0.102          | 0.165           |
| G35      | GSM 850  | GSM  | 190     | Rear Face     | 1.5                      | Down | 3       | 32.5                  | 31.75                 | -0.05            | 0.142         | 0.108          | 0.169           |
| G36      | GSM 850  | GSM  | 190     | Rear Face     | 1.5                      | Down | 4       | 32.5                  | 31.75                 | 0                | 0.132         | 0.098          | 0.157           |
| G47      | GSM 850  | GSM  | 190     | Front Face    | 1.5                      | Up   | 1       | 33.5                  | 32.59                 | 0                | 0.061         | 0.046          | 0.076           |
| G48      | GSM 850  | GSM  | 190     | Rear Face     | 1.5                      | Up   | 1       | 33.5                  | 32.59                 | -0.06            | 0.081         | 0.061          | 0.099           |
| G49      | GSM 850  | GSM  | 190     | Rear Face     | 1.5                      | Up   | 2       | 33.5                  | 32.59                 | 0.12             | 0.075         | 0.057          | 0.093           |
| G50      | GSM 850  | GSM  | 190     | Rear Face     | 1.5                      | Up   | 3       | 33.5                  | 32.59                 | 0.04             | 0.084         | 0.067          | 0.103           |
| G51      | GSM 850  | GSM  | 190     | Rear Face     | 1.5                      | Up   | 4       | 33.5                  | 32.59                 | -0.18            | <b>0.092</b>  | <b>0.060</b>   | <b>0.113</b>    |
| G61      | GSM 1900 | GSM  | 661     | Front Face    | 1.5                      | Down | 1       | 28.5                  | 27.59                 | 0.08             | 0.134         | 0.082          | 0.165           |
| G62      | GSM 1900 | GSM  | 661     | Rear Face     | 1.5                      | Down | 1       | 28.5                  | 27.59                 | 0                | <b>0.280</b>  | <b>0.166</b>   | <b>0.345</b>    |
| G63      | GSM 1900 | GSM  | 661     | Rear Face     | 1.5                      | Down | 2       | 28.5                  | 27.59                 | 0.02             | 0.215         | 0.112          | 0.265           |
| G64      | GSM 1900 | GSM  | 661     | Rear Face     | 1.5                      | Down | 3       | 28.5                  | 27.59                 | 0.18             | 0.210         | 0.124          | 0.259           |
| G65      | GSM 1900 | GSM  | 661     | Rear Face     | 1.5                      | Down | 4       | 28.5                  | 27.59                 | -0.01            | 0.209         | 0.121          | 0.258           |
| G76      | GSM 1900 | GSM  | 661     | Front Face    | 1.5                      | Up   | 1       | 29                    | 28.42                 | 0                | 0.100         | 0.057          | 0.114           |
| G77      | GSM 1900 | GSM  | 661     | Rear Face     | 1.5                      | Up   | 1       | 29                    | 28.42                 | 0.07             | 0.151         | 0.085          | 0.173           |
| G78      | GSM 1900 | GSM  | 661     | Rear Face     | 1.5                      | Up   | 2       | 29                    | 28.42                 | 0.03             | 0.149         | 0.084          | 0.170           |
| G79      | GSM 1900 | GSM  | 661     | Rear Face     | 1.5                      | Up   | 3       | 29                    | 28.42                 | 0.12             | <b>0.157</b>  | <b>0.087</b>   | <b>0.179</b>    |
| G80      | GSM 1900 | GSM  | 661     | Rear Face     | 1.5                      | Up   | 4       | 29                    | 28.42                 | -0.1             | 0.145         | 0.082          | 0.166           |

Note: The value with boldface is the maximum SAR Value of each test band.

## 2. Body-worn SAR test results of UMTS

| Test No. | Band    | Mode     | Channel | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|----------|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| U48      | UMTS B2 | RMC12.2K | 9400    | Front Face    | 1.5                      | Down | 1       | 20.5                  | 19.38                 | 0.01             | 0.104         | 0.064          | 0.135           |
| U49      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.5                      | Down | 1       | 20.5                  | 19.38                 | 0.09             | <b>0.221</b>  | <b>0.131</b>   | <b>0.286</b>    |
| U50      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.5                      | Down | 2       | 20.5                  | 19.38                 | 0.03             | 0.214         | 0.128          | 0.277           |
| U51      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.5                      | Down | 3       | 20.5                  | 19.38                 | -0.03            | 0.207         | 0.122          | 0.268           |
| U52      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.5                      | Down | 4       | 20.5                  | 19.38                 | 0                | 0.210         | 0.124          | 0.272           |
| U63      | UMTS B2 | RMC12.2K | 9400    | Front Face    | 1.5                      | Up   | 1       | 20.5                  | 19.76                 | 0.01             | 0.139         | 0.080          | 0.165           |
| U64      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.5                      | Up   | 1       | 20.5                  | 19.76                 | 0.15             | 0.200         | 0.112          | 0.237           |
| U65      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.5                      | Up   | 2       | 20.5                  | 19.76                 | -0.05            | 0.197         | 0.108          | 0.234           |
| U66      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.5                      | Up   | 3       | 20.5                  | 19.76                 | 0.01             | <b>0.202</b>  | <b>0.112</b>   | <b>0.240</b>    |
| U67      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.5                      | Up   | 4       | 20.5                  | 19.76                 | 0.14             | 0.188         | 0.107          | 0.223           |
| U77      | UMTS B4 | RMC12.2K | 1413    | Front Face    | 1.5                      | Down | 1       | 21                    | 19.75                 | 0.03             | 0.088         | 0.056          | 0.117           |
| U78      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.5                      | Down | 1       | 21                    | 19.75                 | 0.07             | <b>0.256</b>  | <b>0.153</b>   | <b>0.341</b>    |
| U79      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.5                      | Down | 2       | 21                    | 19.75                 | 0.12             | 0.251         | 0.151          | 0.335           |
| U80      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.5                      | Down | 3       | 21                    | 19.75                 | 0.01             | 0.245         | 0.147          | 0.327           |
| U81      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.5                      | Down | 4       | 21                    | 19.75                 | -0.05            | 0.248         | 0.149          | 0.331           |
| U92      | UMTS B4 | RMC12.2K | 1413    | Front Face    | 1.5                      | Up   | 1       | 21                    | 20.14                 | 0.06             | 0.107         | 0.063          | 0.130           |
| U93      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.5                      | Up   | 1       | 21                    | 20.14                 | 0.07             | 0.130         | 0.076          | 0.158           |
| U94      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.5                      | Up   | 2       | 21                    | 20.14                 | 0.02             | 0.134         | 0.077          | 0.163           |
| U95      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.5                      | Up   | 3       | 21                    | 20.14                 | -0.05            | 0.129         | 0.071          | 0.157           |
| U96      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.5                      | Up   | 4       | 21                    | 20.14                 | 0.16             | <b>0.140</b>  | <b>0.081</b>   | <b>0.171</b>    |
| U106     | UMTS B5 | RMC12.2K | 4182    | Front Face    | 1.5                      | Down | 1       | 24                    | 22.62                 | 0.12             | 0.112         | 0.116          | 0.154           |
| U107     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.5                      | Down | 1       | 24                    | 22.62                 | -0.1             | 0.161         | 0.122          | 0.221           |
| U108     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.5                      | Down | 2       | 24                    | 22.62                 | 0.06             | 0.149         | 0.151          | 0.205           |
| U109     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.5                      | Down | 3       | 24                    | 22.62                 | -0.01            | <b>0.183</b>  | <b>0.138</b>   | <b>0.251</b>    |
| U110     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.5                      | Down | 4       | 24                    | 22.62                 | 0.03             | 0.178         | 0.121          | 0.245           |
| U121     | UMTS B5 | RMC12.2K | 4182    | Front Face    | 1.5                      | Up   | 1       | 24                    | 22.87                 | -0.02            | 0.056         | 0.043          | 0.073           |
| U122     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.5                      | Up   | 1       | 24                    | 22.87                 | -0.09            | <b>0.076</b>  | <b>0.058</b>   | <b>0.098</b>    |
| U123     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.5                      | Up   | 2       | 24                    | 22.87                 | 0.01             | 0.070         | 0.052          | 0.091           |
| U124     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.5                      | Up   | 3       | 24                    | 22.87                 | -0.03            | 0.075         | 0.057          | 0.097           |
| U125     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.5                      | Up   | 4       | 24                    | 22.87                 | 0                | 0.065         | 0.045          | 0.085           |

Note: The value with boldface is the maximum SAR Value of each test band.

### 3. Body-worn SAR test results of LTE

| Test No. | Band   | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|--------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L239     | LTE B2 | QPSK20M | 18700   | 1  | 50      | Front Face    | 1.5                      | Down | 1       | 20.5                  | 20.04                 | 0.06             | 0.116         | 0.073          | 0.129           |
| L240     | LTE B2 | QPSK20M | 18700   | 1  | 50      | Rear Face     | 1.5                      | Down | 1       | 20.5                  | 20.04                 | -0.19            | 0.245         | 0.145          | 0.273           |
| L241     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Front Face    | 1.5                      | Down | 1       | 20.5                  | 19.72                 | 0.13             | 0.121         | 0.075          | 0.145           |
| L242     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Rear Face     | 1.5                      | Down | 1       | 20.5                  | 19.72                 | 0.09             | <b>0.265</b>  | <b>0.155</b>   | <b>0.317</b>    |
| L243     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Rear Face     | 1.5                      | Down | 2       | 20.5                  | 19.72                 | 0.03             | 0.245         | 0.136          | 0.293           |
| L244     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Rear Face     | 1.5                      | Down | 3       | 20.5                  | 19.72                 | 0.06             | 0.228         | 0.129          | 0.273           |
| L245     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Rear Face     | 1.5                      | Down | 4       | 20.5                  | 19.72                 | -0.02            | 0.236         | 0.132          | 0.282           |
| L261     | LTE B2 | QPSK20M | 18700   | 1  | 50      | Front Face    | 1.5                      | Up   | 1       | 20.5                  | 20.35                 | 0.01             | 0.143         | 0.082          | 0.148           |
| L262     | LTE B2 | QPSK20M | 18700   | 1  | 50      | Rear Face     | 1.5                      | Up   | 1       | 20.5                  | 20.35                 | 0.11             | 0.202         | 0.113          | 0.209           |
| L263     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Front Face    | 1.5                      | Up   | 1       | 20.5                  | 20.25                 | -0.12            | 0.163         | 0.093          | 0.173           |
| L264     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Rear Face     | 1.5                      | Up   | 1       | 20.5                  | 20.25                 | 0.13             | <b>0.213</b>  | <b>0.119</b>   | <b>0.225</b>    |
| L265     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Rear Face     | 1.5                      | Up   | 2       | 20.5                  | 20.25                 | 0.06             | 0.207         | 0.111          | 0.219           |
| L266     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Rear Face     | 1.5                      | Up   | 3       | 20.5                  | 20.25                 | 0.09             | 0.209         | 0.115          | 0.221           |
| L267     | LTE B2 | QPSK20M | 19100   | 50 | 25      | Rear Face     | 1.5                      | Up   | 4       | 20.5                  | 20.25                 | 0.04             | 0.212         | 0.119          | 0.224           |
| L281     | LTE B4 | QPSK20M | 20050   | 1  | 50      | Front Face    | 1.5                      | Down | 1       | 21                    | 20.28                 | 0.12             | 0.090         | 0.057          | 0.106           |
| L282     | LTE B4 | QPSK20M | 20050   | 1  | 50      | Rear Face     | 1.5                      | Down | 1       | 21                    | 20.28                 | 0.02             | 0.246         | 0.149          | 0.290           |
| L283     | LTE B4 | QPSK20M | 20175   | 50 | 0       | Front Face    | 1.5                      | Down | 1       | 21                    | 19.97                 | -0.05            | 0.088         | 0.056          | 0.111           |
| L284     | LTE B4 | QPSK20M | 20175   | 50 | 0       | Rear Face     | 1.5                      | Down | 1       | 21                    | 19.97                 | 0.09             | 0.252         | 0.151          | 0.319           |
| L285     | LTE B4 | QPSK20M | 20175   | 50 | 0       | Rear Face     | 1.5                      | Down | 2       | 21                    | 19.97                 | 0                | <b>0.291</b>  | <b>0.175</b>   | <b>0.369</b>    |
| L286     | LTE B4 | QPSK20M | 20175   | 50 | 0       | Rear Face     | 1.5                      | Down | 3       | 21                    | 19.97                 | -0.13            | 0.272         | 0.161          | 0.344           |
| L287     | LTE B4 | QPSK20M | 20175   | 50 | 0       | Rear Face     | 1.5                      | Down | 4       | 21                    | 19.97                 | 0.06             | 0.267         | 0.159          | 0.338           |
| L304     | LTE B4 | QPSK20M | 20050   | 1  | 50      | Front Face    | 1.5                      | Up   | 1       | 22                    | 21.64                 | 0.01             | 0.111         | 0.067          | 0.121           |
| L305     | LTE B4 | QPSK20M | 20050   | 1  | 50      | Rear Face     | 1.5                      | Up   | 1       | 22                    | 21.64                 | 0.05             | 0.167         | 0.098          | 0.182           |
| L306     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Front Face    | 1.5                      | Up   | 1       | 22                    | 20.33                 | -0.12            | 0.123         | 0.074          | 0.181           |
| L307     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Rear Face     | 1.5                      | Up   | 1       | 22                    | 20.33                 | 0.02             | 0.179         | 0.105          | 0.263           |
| L308     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Rear Face     | 1.5                      | Up   | 2       | 22                    | 20.33                 | 0.06             | 0.188         | 0.114          | 0.276           |
| L309     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Rear Face     | 1.5                      | Up   | 3       | 22                    | 20.33                 | 0.01             | <b>0.207</b>  | <b>0.121</b>   | <b>0.304</b>    |
| L310     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Rear Face     | 1.5                      | Up   | 4       | 22                    | 20.33                 | -0.05            | 0.193         | 0.119          | 0.283           |
| L324     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Front Face    | 1.5                      | Down | 1       | 24                    | 23.15                 | -0.02            | 0.096         | 0.073          | 0.117           |
| L325     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.5                      | Down | 1       | 24                    | 23.15                 | 0.02             | 0.143         | 0.109          | 0.174           |
| L326     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Front Face    | 1.5                      | Down | 1       | 23                    | 22.08                 | 0.01             | 0.094         | 0.072          | 0.116           |
| L327     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Rear Face     | 1.5                      | Down | 1       | 23                    | 22.08                 | -0.08            | 0.148         | 0.113          | 0.183           |
| L328     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Rear Face     | 1.5                      | Down | 2       | 23                    | 22.08                 | 0.06             | 0.134         | 0.106          | 0.166           |
| L329     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Rear Face     | 1.5                      | Down | 3       | 23                    | 22.08                 | -0.01            | <b>0.170</b>  | <b>0.129</b>   | <b>0.210</b>    |
| L330     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Rear Face     | 1.5                      | Down | 4       | 23                    | 22.08                 | 0.11             | 0.156         | 0.116          | 0.193           |
| L346     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Front Face    | 1.5                      | Up   | 1       | 24                    | 23.47                 | 0.03             | 0.046         | 0.033          | 0.052           |
| L347     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.5                      | Up   | 1       | 24                    | 23.47                 | 0.01             | 0.068         | 0.047          | 0.077           |
| L348     | LTE B5 | QPSK10M | 20600   | 25 | 0       | Front Face    | 1.5                      | Up   | 1       | 23                    | 22.35                 | 0.07             | 0.046         | 0.033          | 0.053           |
| L349     | LTE B5 | QPSK10M | 20600   | 25 | 0       | Rear Face     | 1.5                      | Up   | 1       | 23                    | 22.35                 | 0.02             | 0.061         | 0.042          | 0.071           |
| L350     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.5                      | Up   | 2       | 24                    | 23.47                 | 0                | <b>0.088</b>  | <b>0.060</b>   | <b>0.099</b>    |
| L351     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.5                      | Up   | 3       | 24                    | 23.47                 | 0.03             | 0.082         | 0.051          | 0.092           |
| L352     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.5                      | Up   | 4       | 24                    | 23.47                 | -0.11            | 0.079         | 0.049          | 0.089           |

| Test No. | Band    | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L366     | LTE B7  | QPKS20M | 21350   | 1  | 50      | Front Face    | 1.5                      | Down | 1       | 21.5                  | 21.15                 | 0.11             | 0.133         | 0.084          | 0.144           |
| L367     | LTE B7  | QPKS20M | 21350   | 1  | 50      | Rear Face     | 1.5                      | Down | 1       | 21.5                  | 21.15                 | 0.07             | 0.236         | 0.117          | 0.256           |
| L368     | LTE B7  | QPKS20M | 20850   | 50 | 25      | Front Face    | 1.5                      | Down | 1       | 21.5                  | 20.59                 | 0.06             | 0.116         | 0.070          | 0.143           |
| L369     | LTE B7  | QPKS20M | 20850   | 50 | 25      | Rear Face     | 1.5                      | Down | 1       | 21.5                  | 20.59                 | 0.04             | <b>0.261</b>  | <b>0.130</b>   | <b>0.322</b>    |
| L370     | LTE B7  | QPKS20M | 20850   | 50 | 25      | Rear Face     | 1.5                      | Down | 2       | 21.5                  | 20.59                 | 0.01             | 0.213         | 0.109          | 0.262           |
| L371     | LTE B7  | QPKS20M | 20850   | 50 | 25      | Rear Face     | 1.5                      | Down | 3       | 21.5                  | 20.59                 | 0.04             | 0.258         | 0.128          | 0.318           |
| L372     | LTE B7  | QPKS20M | 20850   | 50 | 25      | Rear Face     | 1.5                      | Down | 4       | 21.5                  | 20.59                 | -0.02            | 0.245         | 0.126          | 0.302           |
| L388     | LTE B7  | QPKS20M | 20850   | 1  | 50      | Front Face    | 1.5                      | Up   | 1       | 18                    | 17.92                 | 0.09             | 0.088         | 0.053          | 0.090           |
| L389     | LTE B7  | QPKS20M | 20850   | 1  | 50      | Rear Face     | 1.5                      | Up   | 1       | 18                    | 17.92                 | 0.04             | <b>0.200</b>  | <b>0.093</b>   | <b>0.204</b>    |
| L390     | LTE B7  | QPKS20M | 20850   | 50 | 50      | Front Face    | 1.5                      | Up   | 1       | 18                    | 17.90                 | -0.13            | 0.086         | 0.046          | 0.088           |
| L391     | LTE B7  | QPKS20M | 20850   | 50 | 50      | Rear Face     | 1.5                      | Up   | 1       | 18                    | 17.90                 | 0.04             | 0.196         | 0.091          | 0.201           |
| L392     | LTE B7  | QPKS20M | 20850   | 1  | 50      | Rear Face     | 1.5                      | Up   | 2       | 18                    | 17.92                 | 0.02             | 0.189         | 0.089          | 0.193           |
| L393     | LTE B7  | QPKS20M | 20850   | 1  | 50      | Rear Face     | 1.5                      | Up   | 3       | 18                    | 17.92                 | -0.01            | 0.191         | 0.090          | 0.195           |
| L394     | LTE B7  | QPKS20M | 20850   | 1  | 50      | Rear Face     | 1.5                      | Up   | 4       | 18                    | 17.92                 | 0.07             | 0.178         | 0.082          | 0.181           |
| L413     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Front Face    | 1.5                      | Down | 1       | 24                    | 22.83                 | 0.02             | 0.150         | 0.117          | 0.196           |
| L414     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.5                      | Down | 1       | 24                    | 22.83                 | -0.14            | <b>0.193</b>  | <b>0.149</b>   | <b>0.253</b>    |
| L415     | LTE B12 | QPSK10M | 23060   | 25 | 25      | Front Face    | 1.5                      | Down | 1       | 23                    | 21.92                 | 0.09             | 0.122         | 0.094          | 0.156           |
| L416     | LTE B12 | QPSK10M | 23060   | 25 | 25      | Rear Face     | 1.5                      | Down | 1       | 23                    | 21.92                 | -0.04            | 0.149         | 0.115          | 0.191           |
| L417     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.5                      | Down | 2       | 24                    | 22.83                 | 0.01             | 0.184         | 0.142          | 0.241           |
| L418     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.5                      | Down | 3       | 24                    | 22.83                 | -0.04            | 0.170         | 0.131          | 0.223           |
| L419     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.5                      | Down | 4       | 24                    | 22.83                 | 0.12             | 0.178         | 0.128          | 0.233           |
| L435     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Front Face    | 1.5                      | Up   | 1       | 24                    | 23.36                 | 0.03             | 0.011         | 0.008          | 0.013           |
| L436     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.5                      | Up   | 1       | 24                    | 23.36                 | 0.01             | <b>0.013</b>  | <b>0.009</b>   | <b>0.015</b>    |
| L437     | LTE B12 | QPSK10M | 23060   | 25 | 25      | Front Face    | 1.5                      | Up   | 1       | 23                    | 22.35                 | 0.07             | 0.009         | 0.007          | 0.011           |
| L438     | LTE B12 | QPSK10M | 23060   | 25 | 25      | Rear Face     | 1.5                      | Up   | 1       | 23                    | 22.35                 | 0.09             | 0.012         | 0.009          | 0.014           |
| L439     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.5                      | Up   | 2       | 24                    | 23.36                 | 0.01             | 0.012         | 0.008          | 0.014           |
| L440     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.5                      | Up   | 3       | 24                    | 23.36                 | 0.03             | 0.012         | 0.008          | 0.014           |
| L441     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.5                      | Up   | 4       | 24                    | 23.36                 | 0                | 0.011         | 0.007          | 0.013           |
| L455     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Front Face    | 1.5                      | Down | 1       | 24                    | 22.78                 | 0.05             | 0.134         | 0.104          | 0.177           |
| L456     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.5                      | Down | 1       | 24                    | 22.78                 | -0.03            | <b>0.189</b>  | <b>0.146</b>   | <b>0.250</b>    |
| L457     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Front Face    | 1.5                      | Down | 1       | 23                    | 21.68                 | 0.12             | 0.104         | 0.821          | 0.141           |
| L458     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Rear Face     | 1.5                      | Down | 1       | 23                    | 21.68                 | 0                | 0.145         | 0.112          | 0.197           |
| L459     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.5                      | Down | 2       | 24                    | 22.78                 | 0.09             | 0.175         | 0.138          | 0.232           |
| L460     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.5                      | Down | 3       | 24                    | 22.78                 | -0.08            | 0.183         | 0.142          | 0.242           |
| L461     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.5                      | Down | 4       | 24                    | 22.78                 | 0.15             | 0.181         | 0.139          | 0.239           |
| L477     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Front Face    | 1.5                      | Up   | 1       | 24                    | 23.75                 | 0.07             | 0.011         | 0.008          | 0.012           |
| L478     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.5                      | Up   | 1       | 24                    | 23.75                 | 0.04             | 0.013         | 0.010          | 0.014           |
| L479     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Front Face    | 1.5                      | Up   | 1       | 23                    | 22.62                 | 0.09             | 0.008         | 0.006          | 0.009           |
| L480     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Rear Face     | 1.5                      | Up   | 1       | 23                    | 22.62                 | 0.01             | 0.011         | 0.007          | 0.011           |
| L481     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.5                      | Up   | 2       | 24                    | 23.75                 | 0.05             | <b>0.015</b>  | <b>0.012</b>   | <b>0.016</b>    |
| L482     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.5                      | Up   | 3       | 24                    | 23.75                 | -0.12            | 0.013         | 0.010          | 0.014           |
| L483     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.5                      | Up   | 4       | 24                    | 23.75                 | 0.06             | 0.014         | 0.011          | 0.015           |

| Test No. | Band    | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L497     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Front Face    | 1.5                      | Down | 1       | 24                    | 23.06                 | 0.01             | 0.122         | 0.093          | 0.152           |
| L498     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.5                      | Down | 1       | 24                    | 23.06                 | -0.02            | 0.179         | 0.137          | 0.222           |
| L499     | LTE B26 | QPSK15M | 26865   | 36 | 19      | Front Face    | 1.5                      | Down | 1       | 23                    | 21.94                 | -0.1             | 0.088         | 0.068          | 0.112           |
| L500     | LTE B26 | QPSK15M | 26865   | 36 | 19      | Rear Face     | 1.5                      | Down | 1       | 23                    | 21.94                 | 0.06             | 0.132         | 0.101          | 0.168           |
| L501     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.5                      | Down | 2       | 24                    | 23.06                 | 0.04             | 0.187         | 0.149          | 0.232           |
| L502     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.5                      | Down | 3       | 24                    | 23.06                 | -0.06            | <b>0.208</b>  | <b>0.159</b>   | <b>0.258</b>    |
| L503     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.5                      | Down | 4       | 24                    | 23.06                 | 0.07             | 0.204         | 0.156          | 0.253           |
| L519     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Front Face    | 1.5                      | Up   | 1       | 24                    | 23.44                 | 0.02             | 0.047         | 0.030          | 0.053           |
| L520     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.5                      | Up   | 1       | 24                    | 23.44                 | -0.09            | <b>0.064</b>  | <b>0.044</b>   | <b>0.073</b>    |
| L521     | LTE B26 | QPSK15M | 26965   | 36 | 0       | Front Face    | 1.5                      | Up   | 1       | 23                    | 22.37                 | 0.06             | 0.020         | 0.010          | 0.023           |
| L522     | LTE B26 | QPSK15M | 26965   | 36 | 0       | Rear Face     | 1.5                      | Up   | 1       | 23                    | 22.37                 | -0.02            | 0.061         | 0.042          | 0.070           |
| L523     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.5                      | Up   | 2       | 24                    | 23.44                 | -0.11            | 0.049         | 0.031          | 0.056           |
| L524     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.5                      | Up   | 3       | 24                    | 23.44                 | 0.03             | 0.059         | 0.040          | 0.067           |
| L525     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.5                      | Up   | 4       | 24                    | 23.44                 | -0.16            | 0.051         | 0.035          | 0.058           |
| L539     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Front Face    | 1.5                      | Down | 1       | 22.5                  | 21.88                 | 0.01             | 0.140         | 0.074          | 0.162           |
| L540     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Rear Face     | 1.5                      | Down | 1       | 22.5                  | 21.88                 | 0                | 0.197         | 0.099          | 0.227           |
| L541     | LTE B38 | QPSK20M | 37850   | 50 | 25      | Front Face    | 1.5                      | Down | 1       | 22.5                  | 21.53                 | 0.06             | 0.126         | 0.068          | 0.157           |
| L542     | LTE B38 | QPSK20M | 37850   | 50 | 25      | Rear Face     | 1.5                      | Down | 1       | 22.5                  | 21.53                 | 0.05             | <b>0.199</b>  | <b>0.099</b>   | <b>0.249</b>    |
| L543     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Rear Face     | 1.5                      | Down | 2       | 22.5                  | 21.53                 | -0.02            | 0.175         | 0.081          | 0.219           |
| L544     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Rear Face     | 1.5                      | Down | 3       | 22.5                  | 21.53                 | 0.05             | 0.178         | 0.090          | 0.222           |
| L545     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Rear Face     | 1.5                      | Down | 4       | 22.5                  | 21.53                 | 0.09             | 0.171         | 0.086          | 0.214           |
| L561     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Front Face    | 1.5                      | Up   | 1       | 20                    | 19.89                 | 0.02             | 0.100         | 0.051          | 0.103           |
| L562     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Rear Face     | 1.5                      | Up   | 1       | 20                    | 19.89                 | 0.06             | 0.218         | 0.099          | 0.224           |
| L563     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Front Face    | 1.5                      | Up   | 1       | 20                    | 19.43                 | -0.13            | 0.108         | 0.054          | 0.123           |
| L564     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Rear Face     | 1.5                      | Up   | 1       | 20                    | 19.43                 | 0.01             | 0.228         | 0.103          | 0.260           |
| L565     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Rear Face     | 1.5                      | Up   | 2       | 20                    | 19.43                 | 0.07             | <b>0.257</b>  | <b>0.115</b>   | <b>0.293</b>    |
| L566     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Rear Face     | 1.5                      | Up   | 3       | 20                    | 19.43                 | 0                | 0.251         | 0.109          | 0.287           |
| L567     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Rear Face     | 1.5                      | Up   | 4       | 20                    | 19.43                 | 0.02             | 0.244         | 0.101          | 0.279           |
| L581     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Front Face    | 1.5                      | Down | 1       | 22.5                  | 21.90                 | 0.03             | 0.143         | 0.073          | 0.164           |
| L582     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Rear Face     | 1.5                      | Down | 1       | 22.5                  | 21.90                 | 0.04             | <b>0.184</b>  | <b>0.091</b>   | <b>0.211</b>    |
| L583     | LTE B41 | QPSK20M | 41140   | 50 | 25      | Front Face    | 1.5                      | Down | 1       | 22.5                  | 21.72                 | -0.01            | 0.135         | 0.070          | 0.162           |
| L584     | LTE B41 | QPSK20M | 41140   | 50 | 25      | Rear Face     | 1.5                      | Down | 1       | 22.5                  | 21.72                 | 0.05             | 0.171         | 0.083          | 0.205           |
| L585     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Rear Face     | 1.5                      | Down | 2       | 22.5                  | 21.90                 | 0.13             | 0.174         | 0.084          | 0.200           |
| L586     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Rear Face     | 1.5                      | Down | 3       | 22.5                  | 21.90                 | 0.06             | 0.170         | 0.084          | 0.195           |
| L587     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Rear Face     | 1.5                      | Down | 4       | 22.5                  | 21.90                 | 0.12             | 0.178         | 0.089          | 0.204           |
| L603     | LTE B41 | QPSK20M | 40440   | 1  | 50      | Front Face    | 1.5                      | Up   | 1       | 20                    | 19.75                 | 0.03             | 0.117         | 0.060          | 0.124           |
| L604     | LTE B41 | QPSK20M | 40440   | 1  | 50      | Rear Face     | 1.5                      | Up   | 1       | 20                    | 19.75                 | 0.01             | 0.249         | 0.114          | 0.264           |
| L605     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Front Face    | 1.5                      | Up   | 1       | 20                    | 19.41                 | -0.14            | 0.118         | 0.060          | 0.135           |
| L606     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Rear Face     | 1.5                      | Up   | 1       | 20                    | 19.41                 | 0.05             | 0.242         | 0.110          | 0.277           |
| L607     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Rear Face     | 1.5                      | Up   | 2       | 20                    | 19.41                 | 0.03             | 0.241         | 0.111          | 0.276           |
| L608     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Rear Face     | 1.5                      | Up   | 3       | 20                    | 19.41                 | 0.19             | 0.238         | 0.107          | 0.273           |
| L609     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Rear Face     | 1.5                      | Up   | 4       | 20                    | 19.41                 | 0.07             | <b>0.247</b>  | <b>0.113</b>   | <b>0.283</b>    |

| Test No. | Band    | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L623     | LTE B66 | QPSK20M | 132072  | 1  | 50      | Front Face    | 1.5                      | Down | 1       | 21                    | 20.81                 | 0.02             | 0.110         | 0.070          | 0.115           |
| L624     | LTE B66 | QPSK20M | 132072  | 1  | 50      | Rear Face     | 1.5                      | Down | 1       | 21                    | 20.81                 | 0.05             | 0.271         | 0.164          | 0.283           |
| L625     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Front Face    | 1.5                      | Down | 1       | 21                    | 20.51                 | -0.03            | 0.012         | 0.073          | 0.014           |
| L626     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Rear Face     | 1.5                      | Down | 1       | 21                    | 20.51                 | 0.01             | 0.269         | 0.162          | 0.301           |
| L627     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Rear Face     | 1.5                      | Down | 2       | 21                    | 20.51                 | 0.09             | 0.256         | 0.156          | 0.287           |
| L628     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Rear Face     | 1.5                      | Down | 3       | 21                    | 20.51                 | 0.02             | <b>0.271</b>  | <b>0.162</b>   | <b>0.304</b>    |
| L629     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Rear Face     | 1.5                      | Down | 4       | 21                    | 20.51                 | -0.12            | 0.261         | 0.159          | 0.292           |
| L655     | LTE B66 | QPSK20M | 132272  | 1  | 50      | Front Face    | 1.5                      | Up   | 1       | 21                    | 20.88                 | 0.04             | 0.123         | 0.072          | 0.126           |
| L656     | LTE B66 | QPSK20M | 132272  | 1  | 50      | Rear Face     | 1.5                      | Up   | 1       | 21                    | 20.88                 | 0.03             | 0.170         | 0.098          | 0.175           |
| L657     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Front Face    | 1.5                      | Up   | 1       | 21                    | 20.81                 | -0.01            | 0.125         | 0.074          | 0.131           |
| L658     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Rear Face     | 1.5                      | Up   | 1       | 21                    | 20.81                 | 0.09             | <b>0.171</b>  | <b>0.099</b>   | <b>0.179</b>    |
| L659     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Rear Face     | 1.5                      | Up   | 2       | 21                    | 20.81                 | -0.12            | 0.164         | 0.088          | 0.171           |
| L660     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Rear Face     | 1.5                      | Up   | 3       | 21                    | 20.81                 | 0.07             | 0.169         | 0.096          | 0.176           |
| L661     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Rear Face     | 1.5                      | Up   | 4       | 21                    | 20.81                 | 0.05             | 0.159         | 0.091          | 0.166           |

Note: The value with boldface is the maximum SAR Value of each test band.

#### 4. Body-worn SAR test results of 2.4G WiFi

WiFi only

| Test No. | Band    | Channel | Test Position | Separation Distance (cm) | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------------|--------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W32      | 802.11b | 6       | Front Face    | 1.5                      | 1       | 1         | 19                    | 18.71                 | 0.07             | 0.145         | 0.076          | 0.155           |
| W33      | 802.11b | 6       | Rear Face     | 1.5                      | 1       | 1         | 19                    | 18.71                 | 0.07             | 0.161         | 0.081          | 0.172           |
| W34      | 802.11b | 6       | Rear Face     | 1.5                      | 2       | 1         | 19                    | 18.71                 | 0.01             | 0.159         | 0.078          | 0.170           |
| W35      | 802.11b | 6       | Rear Face     | 1.5                      | 3       | 1         | 19                    | 18.71                 | 0.04             | <b>0.164</b>  | <b>0.081</b>   | <b>0.175</b>    |
| W36      | 802.11b | 6       | Rear Face     | 1.5                      | 4       | 1         | 19                    | 18.71                 | -0.12            | 0.154         | 0.074          | 0.165           |

Note: The value with boldface is the maximum SAR Value of each test band.

#### 5. Body-worn SAR test results of BT

| Test No. | Band   | Channel | Test Position | Separation Distance (cm) | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|--------|---------|---------------|--------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W97      | BT DH5 | 0       | Front Face    | 1.5                      | 1       | 1         | 11                    | 10.09                 | 0.09             | 0.022         | 0.009          | 0.027           |
| W98      | BT DH5 | 0       | Rear Face     | 1.5                      | 1       | 1         | 11                    | 10.09                 | -0.02            | 0.025         | 0.011          | 0.031           |
| W99      | BT DH5 | 0       | Rear Face     | 1.5                      | 2       | 1         | 11                    | 10.09                 | 0.06             | <b>0.028</b>  | <b>0.013</b>   | <b>0.035</b>    |
| W100     | BT DH5 | 0       | Rear Face     | 1.5                      | 3       | 1         | 11                    | 10.09                 | 0.01             | 0.027         | 0.012          | 0.033           |
| W101     | BT DH5 | 0       | Rear Face     | 1.5                      | 4       | 1         | 11                    | 10.09                 | -0.05            | 0.024         | 0.010          | 0.029           |

Note: The value with boldface is the maximum SAR Value of each test band.

#### 6. Body-worn SAR test results of 5G WiFi

WiFi only

| Test No. | Band    | Channel | Test Position | Separation Distance (cm) | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------------|--------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W46      | 802.11a | 52      | Front Face    | 1.5                      | 1       | 6         | 20                    | 18.85                 | 0                | 0.247         | 0.050          | 0.322           |
| W47      | 802.11a | 52      | Rear Face     | 1.5                      | 1       | 6         | 20                    | 18.85                 | 0                | <b>0.328</b>  | <b>0.064</b>   | <b>0.427</b>    |
| W48      | 802.11a | 52      | Rear Face     | 1.5                      | 2       | 6         | 20                    | 18.85                 | 0.06             | 0.317         | 0.054          | 0.413           |
| W49      | 802.11a | 52      | Rear Face     | 1.5                      | 3       | 6         | 20                    | 18.85                 | 0.02             | 0.321         | 0.059          | 0.418           |
| W50      | 802.11a | 52      | Rear Face     | 1.5                      | 4       | 6         | 20                    | 18.85                 | -0.13            | 0.307         | 0.053          | 0.400           |
| W60      | 802.11a | 108     | Front Face    | 1.5                      | 1       | 6         | 20                    | 18.67                 | 0.11             | 0.267         | 0.103          | 0.363           |
| W61      | 802.11a | 108     | Rear Face     | 1.5                      | 1       | 6         | 20                    | 18.67                 | 0                | <b>0.334</b>  | <b>0.128</b>   | <b>0.454</b>    |
| W62      | 802.11a | 108     | Rear Face     | 1.5                      | 2       | 6         | 20                    | 18.67                 | 0.06             | 0.317         | 0.121          | 0.431           |
| W63      | 802.11a | 108     | Rear Face     | 1.5                      | 3       | 6         | 20                    | 18.67                 | -0.12            | 0.325         | 0.124          | 0.441           |
| W64      | 802.11a | 108     | Rear Face     | 1.5                      | 4       | 6         | 20                    | 18.67                 | 0.05             | 0.329         | 0.126          | 0.447           |
| W74      | 802.11a | 149     | Front Face    | 1.5                      | 1       | 6         | 20                    | 18.68                 | 0.08             | <b>0.255</b>  | <b>0.100</b>   | <b>0.346</b>    |
| W75      | 802.11a | 149     | Rear Face     | 1.5                      | 1       | 6         | 20                    | 18.68                 | 0.01             | 0.244         | 0.106          | 0.331           |
| W76      | 802.11a | 149     | Front Face    | 1.5                      | 2       | 6         | 20                    | 18.68                 | 0.06             | 0.249         | 0.108          | 0.337           |
| W77      | 802.11a | 149     | Front Face    | 1.5                      | 3       | 6         | 20                    | 18.68                 | -0.05            | 0.247         | 0.107          | 0.335           |
| W78      | 802.11a | 149     | Front Face    | 1.5                      | 4       | 6         | 20                    | 18.68                 | 0.12             | 0.239         | 0.098          | 0.324           |

Note: The value with boldface is the maximum SAR Value of each test band.

### 7.2.3 SAR MEASUREMENT RESULT OF HOTSPOT

#### 1. Hotspot SAR test results of GSM

| Test No. | Band     | Mode    | Channel | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|----------|---------|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| G38      | GSM 850  | GPRS2TX | 190     | Front Face    | 1.0                      | Down | 1       | 31                    | 29.66                 | 0.03             | 0.080         | 0.056          | 0.109           |
| G39      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Down | 1       | 31                    | 29.66                 | 0.04             | 0.166         | 0.099          | 0.226           |
| G40      | GSM 850  | GPRS2TX | 190     | Left Side     | 1.0                      | Down | 1       | 31                    | 29.66                 | 0                | 0.044         | 0.031          | 0.059           |
| G41      | GSM 850  | GPRS2TX | 190     | Right Side    | 1.0                      | Down | 1       | 31                    | 29.66                 | 0.08             | 0.093         | 0.063          | 0.126           |
| G42      | GSM 850  | GPRS2TX | 190     | Bottom Side   | 1.0                      | Down | 1       | 31                    | 29.66                 | 0.01             | 0.150         | 0.080          | 0.204           |
| G43      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Down | 2       | 31                    | 29.66                 | -0.06            | 0.159         | 0.089          | 0.216           |
| G44      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Down | 3       | 31                    | 29.66                 | 0.03             | 0.178         | 0.119          | 0.242           |
| G45      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Down | 4       | 31                    | 29.66                 | -0.11            | <b>0.216</b>  | <b>0.128</b>   | <b>0.294</b>    |
| G53      | GSM 850  | GPRS2TX | 190     | Front Face    | 1.0                      | Up   | 1       | 32                    | 30.27                 | 0                | 0.106         | 0.070          | 0.158           |
| G54      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Up   | 1       | 32                    | 30.27                 | -0.08            | 0.155         | 0.101          | 0.231           |
| G55      | GSM 850  | GPRS2TX | 190     | Left Side     | 1.0                      | Up   | 1       | 32                    | 30.27                 | 0.03             | 0.069         | 0.048          | 0.103           |
| G56      | GSM 850  | GPRS2TX | 190     | Top Side      | 1.0                      | Up   | 1       | 32                    | 30.27                 | -0.01            | 0.149         | 0.092          | 0.222           |
| G57      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Up   | 2       | 32                    | 30.27                 | -0.07            | <b>0.190</b>  | <b>0.123</b>   | <b>0.283</b>    |
| G58      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Up   | 3       | 32                    | 30.27                 | 0.1              | 0.152         | 0.099          | 0.226           |
| G59      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Up   | 4       | 32                    | 30.27                 | -0.04            | 0.144         | 0.094          | 0.214           |
| G67      | GSM 1900 | GPRS4TX | 661     | Front Face    | 1.0                      | Down | 1       | 24                    | 22.51                 | 0.03             | 0.162         | 0.099          | 0.228           |
| G68      | GSM 1900 | GPRS4TX | 661     | Rear Face     | 1.0                      | Down | 1       | 24                    | 22.51                 | 0.13             | 0.423         | 0.236          | 0.596           |
| G69      | GSM 1900 | GPRS4TX | 661     | Left Side     | 1.0                      | Down | 1       | 24                    | 22.51                 | -0.01            | 0.080         | 0.042          | 0.112           |
| G70      | GSM 1900 | GPRS4TX | 661     | Right Side    | 1.0                      | Down | 1       | 24                    | 22.51                 | 0.05             | 0.039         | 0.022          | 0.055           |
| G71      | GSM 1900 | GPRS4TX | 661     | Bottom Side   | 1.0                      | Down | 1       | 24                    | 22.51                 | 0.02             | <b>0.496</b>  | <b>0.265</b>   | <b>0.699</b>    |
| G72      | GSM 1900 | GPRS4TX | 661     | Bottom Side   | 1.0                      | Down | 2       | 24                    | 22.51                 | 0.07             | 0.487         | 0.258          | 0.686           |
| G73      | GSM 1900 | GPRS4TX | 661     | Bottom Side   | 1.0                      | Down | 3       | 24                    | 22.51                 | 0.03             | 0.445         | 0.238          | 0.627           |
| G74      | GSM 1900 | GPRS4TX | 661     | Bottom Side   | 1.0                      | Down | 4       | 24                    | 22.51                 | 0.01             | 0.472         | 0.247          | 0.665           |
| G82      | GSM 1900 | GPRS4TX | 661     | Front Face    | 1.0                      | Up   | 1       | 24.5                  | 22.67                 | 0                | 0.183         | 0.098          | 0.279           |
| G83      | GSM 1900 | GPRS4TX | 661     | Rear Face     | 1.0                      | Up   | 1       | 24.5                  | 22.67                 | 0.11             | 0.291         | 0.155          | 0.443           |
| G84      | GSM 1900 | GPRS4TX | 661     | Left Side     | 1.0                      | Up   | 1       | 24.5                  | 22.67                 | 0.01             | 0.086         | 0.045          | 0.131           |
| G85      | GSM 1900 | GPRS4TX | 661     | Top Side      | 1.0                      | Up   | 1       | 24.5                  | 22.67                 | -0.03            | 0.384         | 0.184          | 0.585           |
| G86      | GSM 1900 | GPRS4TX | 661     | Top Side      | 1.0                      | Up   | 2       | 24.5                  | 22.67                 | -0.04            | 0.380         | 0.181          | 0.579           |
| G87      | GSM 1900 | GPRS4TX | 661     | Top Side      | 1.0                      | Up   | 3       | 24.5                  | 22.67                 | -0.02            | <b>0.387</b>  | <b>0.189</b>   | <b>0.590</b>    |
| G88      | GSM 1900 | GPRS4TX | 661     | Top Side      | 1.0                      | Up   | 4       | 24.5                  | 22.67                 | 0.01             | 0.374         | 0.178          | 0.570           |

Note: The value with boldface is the maximum SAR Value of each test band.

## 2. Hotspot SAR test results of UMTS

| Test No. | Band    | Mode     | Channel | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|----------|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| U54      | UMTS B2 | RMC12.2K | 9400    | Front Face    | 1.0                      | Down | 1       | 20.5                  | 19.38                 | 0.03             | 0.160         | 0.100          | 0.207           |
| U55      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.0                      | Down | 1       | 20.5                  | 19.38                 | 0.02             | 0.419         | 0.238          | 0.542           |
| U56      | UMTS B2 | RMC12.2K | 9400    | Left Side     | 1.0                      | Down | 1       | 20.5                  | 19.38                 | 0.05             | 0.075         | 0.042          | 0.097           |
| U57      | UMTS B2 | RMC12.2K | 9400    | Right Side    | 1.0                      | Down | 1       | 20.5                  | 19.38                 | 0.14             | 0.023         | 0.005          | 0.030           |
| U58      | UMTS B2 | RMC12.2K | 9400    | Bottom Side   | 1.0                      | Down | 1       | 20.5                  | 19.38                 | -0.01            | <b>0.486</b>  | <b>0.266</b>   | <b>0.629</b>    |
| U59      | UMTS B2 | RMC12.2K | 9400    | Bottom Side   | 1.0                      | Down | 2       | 20.5                  | 19.38                 | 0.08             | 0.477         | 0.257          | 0.617           |
| U60      | UMTS B2 | RMC12.2K | 9400    | Bottom Side   | 1.0                      | Down | 3       | 20.5                  | 19.38                 | 0.03             | 0.485         | 0.264          | 0.628           |
| U61      | UMTS B2 | RMC12.2K | 9400    | Bottom Side   | 1.0                      | Down | 4       | 20.5                  | 19.38                 | -0.03            | 0.474         | 0.258          | 0.613           |
| U69      | UMTS B2 | RMC12.2K | 9400    | Front Face    | 1.0                      | Up   | 1       | 20.5                  | 19.76                 | 0.02             | 0.241         | 0.128          | 0.286           |
| U70      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.0                      | Up   | 1       | 20.5                  | 19.76                 | 0.09             | 0.424         | 0.227          | 0.503           |
| U71      | UMTS B2 | RMC12.2K | 9400    | Left Side     | 1.0                      | Up   | 1       | 20.5                  | 19.76                 | 0.12             | 0.109         | 0.059          | 0.129           |
| U72      | UMTS B2 | RMC12.2K | 9400    | Top Side      | 1.0                      | Up   | 1       | 20.5                  | 19.76                 | 0.02             | 0.447         | 0.224          | 0.530           |
| U73      | UMTS B2 | RMC12.2K | 9400    | Top Side      | 1.0                      | Up   | 2       | 20.5                  | 19.76                 | 0                | 0.432         | 0.230          | 0.512           |
| U74      | UMTS B2 | RMC12.2K | 9400    | Top Side      | 1.0                      | Up   | 3       | 20.5                  | 19.76                 | 0.06             | <b>0.504</b>  | <b>0.251</b>   | <b>0.598</b>    |
| U75      | UMTS B2 | RMC12.2K | 9400    | Top Side      | 1.0                      | Up   | 4       | 20.5                  | 19.76                 | -0.04            | 0.464         | 0.239          | 0.550           |
| U83      | UMTS B4 | RMC12.2K | 1413    | Front Face    | 1.0                      | Down | 1       | 21                    | 19.75                 | 0.08             | 0.139         | 0.088          | 0.185           |
| U84      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.0                      | Down | 1       | 21                    | 19.75                 | 0.09             | 0.483         | 0.278          | 0.644           |
| U85      | UMTS B4 | RMC12.2K | 1413    | Left Side     | 1.0                      | Down | 1       | 21                    | 19.75                 | -0.12            | 0.099         | 0.061          | 0.132           |
| U86      | UMTS B4 | RMC12.2K | 1413    | Right Side    | 1.0                      | Down | 1       | 21                    | 19.75                 | 0.06             | 0.045         | 0.027          | 0.060           |
| U87      | UMTS B4 | RMC12.2K | 1413    | Bottom Side   | 1.0                      | Down | 1       | 21                    | 19.75                 | 0.01             | 0.509         | 0.284          | 0.679           |
| U88      | UMTS B4 | RMC12.2K | 1413    | Bottom Side   | 1.0                      | Down | 2       | 21                    | 19.75                 | 0.01             | <b>0.510</b>  | <b>0.287</b>   | <b>0.680</b>    |
| U89      | UMTS B4 | RMC12.2K | 1413    | Bottom Side   | 1.0                      | Down | 3       | 21                    | 19.75                 | 0.13             | 0.501         | 0.278          | 0.668           |
| U90      | UMTS B4 | RMC12.2K | 1413    | Bottom Side   | 1.0                      | Down | 4       | 21                    | 19.75                 | -0.07            | 0.506         | 0.282          | 0.675           |
| U98      | UMTS B4 | RMC12.2K | 1413    | Front Face    | 1.0                      | Up   | 1       | 21                    | 20.14                 | 0.01             | 0.208         | 0.118          | 0.254           |
| U99      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.0                      | Up   | 1       | 21                    | 20.14                 | 0.07             | 0.294         | 0.164          | 0.358           |
| U100     | UMTS B4 | RMC12.2K | 1413    | Left Side     | 1.0                      | Up   | 1       | 21                    | 20.14                 | 0.06             | 0.085         | 0.048          | 0.104           |
| U101     | UMTS B4 | RMC12.2K | 1413    | Top Side      | 1.0                      | Up   | 1       | 21                    | 20.14                 | 0.03             | 0.425         | 0.222          | 0.518           |
| U102     | UMTS B4 | RMC12.2K | 1413    | Top Side      | 1.0                      | Up   | 2       | 21                    | 20.14                 | 0.11             | 0.431         | 0.213          | 0.525           |
| U103     | UMTS B4 | RMC12.2K | 1413    | Top Side      | 1.0                      | Up   | 3       | 21                    | 20.14                 | -0.01            | <b>0.439</b>  | <b>0.233</b>   | <b>0.535</b>    |
| U104     | UMTS B4 | RMC12.2K | 1413    | Top Side      | 1.0                      | Up   | 4       | 21                    | 20.14                 | -0.09            | 0.413         | 0.239          | 0.503           |
| U112     | UMTS B5 | RMC12.2K | 4182    | Front Face    | 1.0                      | Down | 1       | 24                    | 22.62                 | 0.06             | 0.113         | 0.070          | 0.155           |
| U113     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Down | 1       | 24                    | 22.62                 | 0.04             | <b>0.219</b>  | <b>0.129</b>   | <b>0.301</b>    |
| U114     | UMTS B5 | RMC12.2K | 4182    | Left Side     | 1.0                      | Down | 1       | 24                    | 22.62                 | 0.12             | 0.066         | 0.044          | 0.090           |
| U115     | UMTS B5 | RMC12.2K | 4182    | Right Side    | 1.0                      | Down | 1       | 24                    | 22.62                 | 0.1              | 0.116         | 0.076          | 0.159           |
| U116     | UMTS B5 | RMC12.2K | 4182    | Bottom Side   | 1.0                      | Down | 1       | 24                    | 22.62                 | -0.03            | 0.186         | 0.099          | 0.256           |
| U117     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Down | 2       | 24                    | 22.62                 | 0.07             | 0.205         | 0.114          | 0.282           |
| U118     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Down | 3       | 24                    | 22.62                 | 0.03             | 0.209         | 0.114          | 0.287           |
| U119     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Down | 4       | 24                    | 22.62                 | 0.02             | 0.202         | 0.108          | 0.278           |
| U127     | UMTS B5 | RMC12.2K | 4182    | Front Face    | 1.0                      | Up   | 1       | 24                    | 22.87                 | 0.12             | 0.073         | 0.044          | 0.095           |
| U128     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Up   | 1       | 24                    | 22.87                 | 0                | 0.110         | 0.070          | 0.143           |
| U129     | UMTS B5 | RMC12.2K | 4182    | Left Side     | 1.0                      | Up   | 1       | 24                    | 22.87                 | 0.01             | 0.057         | 0.036          | 0.074           |
| U130     | UMTS B5 | RMC12.2K | 4182    | Top Side      | 1.0                      | Up   | 1       | 24                    | 22.87                 | 0.02             | 0.098         | 0.061          | 0.127           |
| U131     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Up   | 2       | 24                    | 22.87                 | 0.09             | 0.128         | 0.083          | 0.166           |
| U132     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Up   | 3       | 24                    | 22.87                 | 0                | <b>0.157</b>  | <b>0.100</b>   | <b>0.204</b>    |
| U133     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Up   | 4       | 24                    | 22.87                 | -0.06            | 0.142         | 0.091          | 0.184           |

Note: The value with boldface is the maximum SAR Value of each test band.

### 3. Hotspot SAR test results of LTE

| Test No. | Band   | Mode    | Channel | RB  | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|--------|---------|---------|-----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L247     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Front Face    | 1.0                      | Down | 1       | 20.5                  | 20.04                 | 0.16             | 0.186         | 0.116          | 0.207           |
| L248     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Rear Face     | 1.0                      | Down | 1       | 20.5                  | 20.04                 | -0.05            | 0.456         | 0.268          | 0.507           |
| L249     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Left Side     | 1.0                      | Down | 1       | 20.5                  | 20.04                 | 0.02             | 0.065         | 0.034          | 0.072           |
| L250     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Right Side    | 1.0                      | Down | 1       | 20.5                  | 20.04                 | 0.04             | 0.048         | 0.029          | 0.053           |
| L251     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Bottom Side   | 1.0                      | Down | 1       | 20.5                  | 20.04                 | 0.06             | 0.562         | 0.308          | 0.625           |
| L252     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Front Face    | 1.0                      | Down | 1       | 20.5                  | 19.72                 | -0.05            | 0.193         | 0.119          | 0.231           |
| L253     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Rear Face     | 1.0                      | Down | 1       | 20.5                  | 19.72                 | 0.08             | 0.471         | 0.267          | 0.563           |
| L254     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Left Side     | 1.0                      | Down | 1       | 20.5                  | 19.72                 | -0.15            | 0.095         | 0.049          | 0.114           |
| L255     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Right Side    | 1.0                      | Down | 1       | 20.5                  | 19.72                 | 0.01             | 0.053         | 0.032          | 0.063           |
| L256     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Bottom Side   | 1.0                      | Down | 1       | 20.5                  | 19.72                 | 0.01             | <b>0.554</b>  | <b>0.300</b>   | <b>0.662</b>    |
| L257     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Bottom Side   | 1.0                      | Down | 2       | 20.5                  | 19.72                 | 0                | 0.505         | 0.276          | 0.604           |
| L258     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Bottom Side   | 1.0                      | Down | 3       | 20.5                  | 19.72                 | 0.13             | 0.543         | 0.296          | 0.649           |
| L259     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Bottom Side   | 1.0                      | Down | 4       | 20.5                  | 19.72                 | -0.09            | 0.539         | 0.283          | 0.644           |
| L269     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Front Face    | 1.0                      | Up   | 1       | 20.5                  | 20.35                 | -0.02            | 0.278         | 0.149          | 0.287           |
| L270     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Rear Face     | 1.0                      | Up   | 1       | 20.5                  | 20.35                 | 0.09             | 0.383         | 0.207          | 0.396           |
| L271     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Left Side     | 1.0                      | Up   | 1       | 20.5                  | 20.35                 | 0.13             | 0.111         | 0.060          | 0.115           |
| L272     | LTE B2 | QPSK20M | 18700   | 1   | 50      | Top Side      | 1.0                      | Up   | 1       | 20.5                  | 20.35                 | 0                | 0.502         | 0.252          | 0.519           |
| L273     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Front Face    | 1.0                      | Up   | 1       | 20.5                  | 20.25                 | 0.18             | 0.284         | 0.154          | 0.301           |
| L274     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Rear Face     | 1.0                      | Up   | 1       | 20.5                  | 20.25                 | -0.06            | 0.404         | 0.217          | 0.428           |
| L275     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Left Side     | 1.0                      | Up   | 1       | 20.5                  | 20.25                 | -0.13            | 0.117         | 0.064          | 0.124           |
| L276     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Top Side      | 1.0                      | Up   | 1       | 20.5                  | 20.25                 | 0.01             | <b>0.521</b>  | <b>0.256</b>   | <b>0.551</b>    |
| L277     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Top Side      | 1.0                      | Up   | 2       | 20.5                  | 20.25                 | 0.08             | 0.506         | 0.249          | 0.536           |
| L278     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Top Side      | 1.0                      | Up   | 3       | 20.5                  | 20.25                 | 0.14             | 0.513         | 0.255          | 0.543           |
| L279     | LTE B2 | QPSK20M | 19100   | 50  | 25      | Top Side      | 1.0                      | Up   | 4       | 20.5                  | 20.25                 | -0.02            | 0.510         | 0.254          | 0.540           |
| L289     | LTE B4 | QPSK20M | 20050   | 1   | 50      | Front Face    | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.03             | 0.173         | 0.110          | 0.204           |
| L290     | LTE B4 | QPSK20M | 20050   | 1   | 50      | Rear Face     | 1.0                      | Down | 1       | 21                    | 20.28                 | -0.12            | 0.565         | 0.331          | 0.667           |
| L291     | LTE B4 | QPSK20M | 20050   | 1   | 50      | Left Side     | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.09             | 0.062         | 0.037          | 0.073           |
| L292     | LTE B4 | QPSK20M | 20050   | 1   | 50      | Right Side    | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.02             | 0.060         | 0.039          | 0.070           |
| L293     | LTE B4 | QPSK20M | 20050   | 1   | 50      | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.01             | 0.643         | 0.356          | 0.759           |
| L294     | LTE B4 | QPSK20M | 20175   | 50  | 0       | Front Face    | 1.0                      | Down | 1       | 21                    | 19.97                 | 0.05             | 0.177         | 0.112          | 0.224           |
| L295     | LTE B4 | QPSK20M | 20175   | 50  | 0       | Rear Face     | 1.0                      | Down | 1       | 21                    | 19.97                 | 0.08             | 0.531         | 0.305          | 0.672           |
| L296     | LTE B4 | QPSK20M | 20175   | 50  | 0       | Left Side     | 1.0                      | Down | 1       | 21                    | 19.97                 | -0.11            | 0.061         | 0.038          | 0.077           |
| L297     | LTE B4 | QPSK20M | 20175   | 50  | 0       | Right Side    | 1.0                      | Down | 1       | 21                    | 19.97                 | 0.05             | 0.050         | 0.031          | 0.063           |
| L298     | LTE B4 | QPSK20M | 20175   | 50  | 0       | Bottom Side   | 1.0                      | Down | 1       | 21                    | 19.97                 | 0.02             | <b>0.630</b>  | <b>0.346</b>   | <b>0.798</b>    |
| L299     | LTE B4 | QPSK20M | 20050   | 50  | 25      | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.05             | 0.647         | 0.358          | 0.764           |
| L300     | LTE B4 | QPSK20M | 20300   | 50  | 25      | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.27                 | 0.05             | 0.634         | 0.350          | 0.750           |
| L301     | LTE B4 | QPSK20M | 20175   | 100 | 0       | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.32                 | 0.02             | 0.633         | 0.350          | 0.741           |
| L302     | LTE B4 | QPSK20M | 20175   | 50  | 0       | Bottom Side   | 1.0                      | Down | 2       | 21                    | 19.97                 | -0.06            | 0.621         | 0.320          | 0.786           |
| L303     | LTE B4 | QPSK20M | 20175   | 50  | 0       | Bottom Side   | 1.0                      | Down | 3       | 21                    | 19.97                 | 0                | 0.602         | 0.334          | 0.762           |
| L311     | LTE B4 | QPSK20M | 20175   | 50  | 0       | Bottom Side   | 1.0                      | Down | 4       | 21                    | 19.97                 | 0.03             | 0.612         | 0.321          | 0.775           |

| Test No. | Band   | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|--------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L312     | LTE B4 | QPSK20M | 20050   | 1  | 50      | Front Face    | 1.0                      | Up   | 1       | 22                    | 21.64                 | -0.02            | 0.266         | 0.145          | 0.289           |
| L313     | LTE B4 | QPSK20M | 20050   | 1  | 50      | Rear Face     | 1.0                      | Up   | 1       | 22                    | 21.64                 | 0.13             | 0.383         | 0.215          | 0.416           |
| L314     | LTE B4 | QPSK20M | 20050   | 1  | 50      | Left Side     | 1.0                      | Up   | 1       | 22                    | 21.64                 | 0.08             | 0.110         | 0.059          | 0.120           |
| L315     | LTE B4 | QPSK20M | 20050   | 1  | 50      | Top Side      | 1.0                      | Up   | 1       | 22                    | 21.64                 | 0                | 0.466         | 0.250          | 0.507           |
| L316     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Front Face    | 1.0                      | Up   | 1       | 22                    | 20.33                 | -0.05            | 0.296         | 0.162          | 0.434           |
| L317     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Rear Face     | 1.0                      | Up   | 1       | 22                    | 20.33                 | 0.06             | 0.467         | 0.256          | 0.685           |
| L318     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Left Side     | 1.0                      | Up   | 1       | 22                    | 20.33                 | 0.17             | 0.115         | 0.064          | 0.169           |
| L319     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Top Side      | 1.0                      | Up   | 1       | 22                    | 20.33                 | 0.02             | 0.496         | 0.265          | 0.728           |
| L320     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Top Side      | 1.0                      | Up   | 2       | 22                    | 20.33                 | -0.14            | 0.528         | 0.256          | 0.775           |
| L321     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Top Side      | 1.0                      | Up   | 3       | 22                    | 20.33                 | 0.02             | <b>0.537</b>  | <b>0.275</b>   | <b>0.788</b>    |
| L322     | LTE B4 | QPSK20M | 20175   | 50 | 25      | Top Side      | 1.0                      | Up   | 4       | 22                    | 20.33                 | 0.09             | 0.504         | 0.239          | 0.740           |
| L332     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Front Face    | 1.0                      | Down | 1       | 24                    | 23.15                 | 0.02             | 0.088         | 0.056          | 0.107           |
| L333     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.0                      | Down | 1       | 24                    | 23.15                 | 0                | 0.171         | 0.101          | 0.208           |
| L334     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Left Side     | 1.0                      | Down | 1       | 24                    | 23.15                 | 0.11             | 0.070         | 0.042          | 0.086           |
| L335     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Right Side    | 1.0                      | Down | 1       | 24                    | 23.15                 | 0.06             | 0.107         | 0.064          | 0.131           |
| L336     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Bottom Side   | 1.0                      | Down | 1       | 24                    | 23.15                 | -0.01            | 0.154         | 0.075          | 0.187           |
| L337     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Front Face    | 1.0                      | Down | 1       | 23                    | 22.08                 | 0.05             | 0.107         | 0.060          | 0.132           |
| L338     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Rear Face     | 1.0                      | Down | 1       | 23                    | 22.08                 | -0.09            | 0.173         | 0.103          | 0.214           |
| L339     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Left Side     | 1.0                      | Down | 1       | 23                    | 22.08                 | 0.03             | 0.056         | 0.033          | 0.069           |
| L340     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Right Side    | 1.0                      | Down | 1       | 23                    | 22.08                 | 0.04             | 0.111         | 0.066          | 0.137           |
| L341     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Bottom Side   | 1.0                      | Down | 1       | 23                    | 22.08                 | -0.15            | 0.148         | 0.074          | 0.183           |
| L342     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Rear Face     | 1.0                      | Down | 2       | 23                    | 22.08                 | 0.01             | 0.201         | 0.119          | 0.249           |
| L343     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Rear Face     | 1.0                      | Down | 3       | 23                    | 22.08                 | 0.03             | <b>0.214</b>  | <b>0.126</b>   | <b>0.265</b>    |
| L344     | LTE B5 | QPSK10M | 20525   | 25 | 12      | Rear Face     | 1.0                      | Down | 4       | 23                    | 22.08                 | -0.08            | 0.198         | 0.106          | 0.245           |
| L354     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Front Face    | 1.0                      | Up   | 1       | 24                    | 23.47                 | 0.01             | 0.097         | 0.062          | 0.110           |
| L355     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.0                      | Up   | 1       | 24                    | 23.47                 | -0.05            | 0.155         | 0.097          | 0.175           |
| L356     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Left Side     | 1.0                      | Up   | 1       | 24                    | 23.47                 | 0.06             | 0.076         | 0.050          | 0.086           |
| L357     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Top Side      | 1.0                      | Up   | 1       | 24                    | 23.47                 | 0.02             | 0.121         | 0.069          | 0.137           |
| L358     | LTE B5 | QPSK10M | 20600   | 25 | 0       | Front Face    | 1.0                      | Up   | 1       | 23                    | 22.35                 | -0.09            | 0.090         | 0.055          | 0.105           |
| L359     | LTE B5 | QPSK10M | 20600   | 25 | 0       | Rear Face     | 1.0                      | Up   | 1       | 23                    | 22.35                 | -0.02            | 0.143         | 0.089          | 0.166           |
| L360     | LTE B5 | QPSK10M | 20600   | 25 | 0       | Left Side     | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.11             | 0.071         | 0.046          | 0.083           |
| L361     | LTE B5 | QPSK10M | 20600   | 25 | 0       | Top Side      | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.03             | 0.114         | 0.067          | 0.133           |
| L362     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.0                      | Up   | 2       | 24                    | 23.47                 | 0                | <b>0.268</b>  | <b>0.160</b>   | <b>0.303</b>    |
| L363     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.0                      | Up   | 3       | 24                    | 23.47                 | 0.02             | 0.213         | 0.121          | 0.241           |
| L364     | LTE B5 | QPSK10M | 20525   | 1  | 24      | Rear Face     | 1.0                      | Up   | 4       | 24                    | 23.47                 | 0.07             | 0.209         | 0.104          | 0.236           |

| Test No. | Band    | Mode    | Channel | RB  | off set | Test Position          | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|-----|---------|------------------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L374     | LTE B7  | QPSK20M | 21350   | 1   | 50      | Front Face             | 1.0                      | Down | 1       | 21.5                  | 21.15                 | 0.02             | 0.227         | 0.126          | 0.246           |
| L375     | LTE B7  | QPSK20M | 21350   | 1   | 50      | Rear Face              | 1.0                      | Down | 1       | 21.5                  | 21.15                 | 0.03             | 0.449         | 0.217          | 0.487           |
| L376     | LTE B7  | QPSK20M | 21350   | 1   | 50      | Left Side              | 1.0                      | Down | 1       | 21.5                  | 21.15                 | 0.07             | 0.085         | 0.047          | 0.093           |
| L377     | LTE B7  | QPSK20M | 21350   | 1   | 50      | Right Side             | 1.0                      | Down | 1       | 21.5                  | 21.15                 | -0.11            | 0.144         | 0.080          | 0.156           |
| L378     | LTE B7  | QPSK20M | 21350   | 1   | 50      | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 21.15                 | 0.16             | 0.621         | 0.288          | 0.674           |
| L379     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Front Face             | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.09             | 0.203         | 0.100          | 0.250           |
| L380     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Rear Face              | 1.0                      | Down | 1       | 21.5                  | 20.59                 | -0.1             | 0.432         | 0.209          | 0.532           |
| L381     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Left Side              | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.06             | 0.053         | 0.029          | 0.066           |
| L382     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Right Side             | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.05             | 0.153         | 0.082          | 0.188           |
| L383     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.06             | 0.692         | 0.322          | 0.852           |
| L674     | LTE B7  | QPSK20M | 21100   | 50  | 25      | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 20.51                 | 0                | 0.656         | 0.305          | 0.824           |
| L675     | LTE B7  | QPSK20M | 21350   | 50  | 25      | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 20.57                 | 0.03             | 0.615         | 0.285          | 0.762           |
| L677     | LTE B7  | QPSK20M | 21350   | 100 | 0       | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 20.55                 | 0.04             | 0.681         | 0.316          | 0.848           |
| L384     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Bottom Side            | 1.0                      | Down | 2       | 21.5                  | 20.59                 | -0.01            | 0.591         | 0.215          | 0.728           |
| L385     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Bottom Side            | 1.0                      | Down | 3       | 21.5                  | 20.59                 | 0.08             | 0.629         | 0.295          | 0.775           |
| L386     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Bottom Side            | 1.0                      | Down | 4       | 21.5                  | 20.59                 | 0.02             | 0.648         | 0.246          | 0.798           |
| L676     | LTE B7  | QPSK20M | 20850   | 50  | 25      | Bottom Side (Repeated) | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.08             | <b>0.695</b>  | <b>0.323</b>   | <b>0.856</b>    |
| L396     | LTE B7  | QPSK20M | 20850   | 1   | 50      | Front Face             | 1.0                      | Up   | 1       | 18                    | 17.92                 | 0.01             | 0.205         | 0.094          | 0.209           |
| L397     | LTE B7  | QPSK20M | 20850   | 1   | 50      | Rear Face              | 1.0                      | Up   | 1       | 18                    | 17.92                 | -0.03            | 0.530         | 0.219          | 0.540           |
| L398     | LTE B7  | QPSK20M | 20850   | 1   | 50      | Left Side              | 1.0                      | Up   | 1       | 18                    | 17.92                 | 0.11             | 0.161         | 0.083          | 0.164           |
| L399     | LTE B7  | QPSK20M | 20850   | 1   | 50      | Top Side               | 1.0                      | Up   | 1       | 18                    | 17.92                 | 0.09             | <b>0.691</b>  | <b>0.281</b>   | <b>0.704</b>    |
| L400     | LTE B7  | QPSK20M | 20850   | 50  | 50      | Front Face             | 1.0                      | Up   | 1       | 18                    | 17.90                 | 0.04             | 0.207         | 0.094          | 0.212           |
| L401     | LTE B7  | QPSK20M | 20850   | 50  | 50      | Rear Face              | 1.0                      | Up   | 1       | 18                    | 17.90                 | 0.01             | 0.554         | 0.217          | 0.567           |
| L402     | LTE B7  | QPSK20M | 20850   | 50  | 50      | Left Side              | 1.0                      | Up   | 1       | 18                    | 17.90                 | 0                | 0.165         | 0.085          | 0.169           |
| L403     | LTE B7  | QPSK20M | 20850   | 50  | 50      | Top Side               | 1.0                      | Up   | 1       | 18                    | 17.90                 | 0.06             | 0.680         | 0.277          | 0.696           |
| L409     | LTE B7  | QPSK20M | 20850   | 1   | 50      | Top Side               | 1.0                      | Up   | 2       | 18                    | 17.92                 | 0.01             | 0.608         | 0.256          | 0.620           |
| L410     | LTE B7  | QPSK20M | 20850   | 1   | 50      | Top Side               | 1.0                      | Up   | 3       | 18                    | 17.92                 | -0.09            | 0.685         | 0.267          | 0.698           |
| L411     | LTE B7  | QPSK20M | 20850   | 1   | 50      | Top Side               | 1.0                      | Up   | 4       | 18                    | 17.92                 | 0.02             | 0.663         | 0.234          | 0.676           |
| L421     | LTE B12 | QPSK10M | 23095   | 1   | 24      | Front Face             | 1.0                      | Down | 1       | 24                    | 22.83                 | 0.11             | 0.156         | 0.138          | 0.204           |
| L422     | LTE B12 | QPSK10M | 23095   | 1   | 24      | Rear Face              | 1.0                      | Down | 1       | 24                    | 22.83                 | -0.01            | <b>0.182</b>  | <b>0.141</b>   | <b>0.238</b>    |
| L423     | LTE B12 | QPSK10M | 23095   | 1   | 24      | Left Side              | 1.0                      | Down | 1       | 24                    | 22.83                 | 0.03             | 0.117         | 0.082          | 0.153           |
| L424     | LTE B12 | QPSK10M | 23095   | 1   | 24      | Right Side             | 1.0                      | Down | 1       | 24                    | 22.83                 | 0.07             | 0.128         | 0.103          | 0.168           |
| L425     | LTE B12 | QPSK10M | 23095   | 1   | 24      | Bottom Side            | 1.0                      | Down | 1       | 24                    | 22.83                 | -0.05            | 0.133         | 0.074          | 0.174           |
| L426     | LTE B12 | QPSK10M | 23060   | 25  | 25      | Front Face             | 1.0                      | Down | 1       | 23                    | 21.92                 | 0.06             | 0.130         | 0.113          | 0.167           |
| L427     | LTE B12 | QPSK10M | 23060   | 25  | 25      | Rear Face              | 1.0                      | Down | 1       | 23                    | 21.92                 | -0.03            | 0.142         | 0.110          | 0.182           |
| L428     | LTE B12 | QPSK10M | 23060   | 25  | 25      | Left Side              | 1.0                      | Down | 1       | 23                    | 21.92                 | -0.09            | 0.098         | 0.068          | 0.125           |
| L429     | LTE B12 | QPSK10M | 23060   | 25  | 25      | Right Side             | 1.0                      | Down | 1       | 23                    | 21.92                 | -0.12            | 0.121         | 0.098          | 0.155           |
| L430     | LTE B12 | QPSK10M | 23060   | 25  | 25      | Bottom Side            | 1.0                      | Down | 1       | 23                    | 21.92                 | 0.05             | 0.092         | 0.056          | 0.118           |
| L431     | LTE B12 | QPSK10M | 23095   | 1   | 24      | Rear Face              | 1.0                      | Down | 2       | 24                    | 22.83                 | 0.16             | 0.168         | 0.127          | 0.220           |
| L432     | LTE B12 | QPSK10M | 23095   | 1   | 24      | Rear Face              | 1.0                      | Down | 3       | 24                    | 22.83                 | -0.07            | 0.180         | 0.139          | 0.236           |
| L433     | LTE B12 | QPSK10M | 23095   | 1   | 24      | Rear Face              | 1.0                      | Down | 4       | 24                    | 22.83                 | 0.04             | 0.171         | 0.129          | 0.224           |

| Test No. | Band    | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L443     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Front Face    | 1.0                      | Up   | 1       | 24                    | 23.36                 | 0.05             | 0.010         | 0.007          | 0.011           |
| L444     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Rear Face     | 1.0                      | Up   | 1       | 24                    | 23.36                 | 0.02             | 0.013         | 0.008          | 0.015           |
| L445     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Left Side     | 1.0                      | Up   | 1       | 24                    | 23.36                 | 0.06             | 0.020         | 0.013          | 0.023           |
| L446     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Top Side      | 1.0                      | Up   | 1       | 24                    | 23.36                 | 0.04             | 0.012         | 0.074          | 0.013           |
| L447     | LTE B12 | QPSK10M | 23060   | 25 | 25      | Front Face    | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.09             | 0.009         | 0.006          | 0.010           |
| L448     | LTE B12 | QPSK10M | 23060   | 25 | 25      | Rear Face     | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.05             | 0.013         | 0.009          | 0.015           |
| L449     | LTE B12 | QPSK10M | 23060   | 25 | 25      | Left Side     | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.02             | 0.017         | 0.012          | 0.020           |
| L450     | LTE B12 | QPSK10M | 23060   | 25 | 25      | Top Side      | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.05             | 0.010         | 0.007          | 0.012           |
| L451     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Left Side     | 1.0                      | Up   | 2       | 24                    | 23.36                 | -0.01            | 0.019         | 0.013          | 0.022           |
| L452     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Left Side     | 1.0                      | Up   | 3       | 24                    | 23.36                 | 0.02             | <b>0.021</b>  | <b>0.015</b>   | <b>0.024</b>    |
| L453     | LTE B12 | QPSK10M | 23095   | 1  | 24      | Left Side     | 1.0                      | Up   | 4       | 24                    | 23.36                 | 0.07             | 0.019         | 0.013          | 0.022           |
| L463     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Front Face    | 1.0                      | Down | 1       | 24                    | 22.78                 | 0.13             | 0.161         | 0.105          | 0.213           |
| L464     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.0                      | Down | 1       | 24                    | 22.78                 | -0.09            | 0.198         | 0.154          | 0.262           |
| L465     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Left Side     | 1.0                      | Down | 1       | 24                    | 22.78                 | 0.08             | 0.131         | 0.082          | 0.173           |
| L466     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Right Side    | 1.0                      | Down | 1       | 24                    | 22.78                 | 0.01             | 0.129         | 0.079          | 0.171           |
| L467     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Bottom Side   | 1.0                      | Down | 1       | 24                    | 22.78                 | -0.06            | 0.120         | 0.052          | 0.159           |
| L468     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Front Face    | 1.0                      | Down | 1       | 23                    | 21.68                 | 0.18             | 0.121         | 0.083          | 0.164           |
| L469     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Rear Face     | 1.0                      | Down | 1       | 23                    | 21.68                 | -0.09            | <b>0.203</b>  | <b>0.134</b>   | <b>0.275</b>    |
| L470     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Left Side     | 1.0                      | Down | 1       | 23                    | 21.68                 | 0.05             | 0.096         | 0.058          | 0.130           |
| L471     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Right Side    | 1.0                      | Down | 1       | 23                    | 21.68                 | 0.09             | 0.103         | 0.062          | 0.140           |
| L472     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Bottom Side   | 1.0                      | Down | 1       | 23                    | 21.68                 | 0.16             | 0.107         | 0.045          | 0.145           |
| L473     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Rear Face     | 1.0                      | Down | 2       | 23                    | 21.68                 | 0.01             | 0.178         | 0.121          | 0.241           |
| L474     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Rear Face     | 1.0                      | Down | 3       | 23                    | 21.68                 | -0.07            | 0.146         | 0.113          | 0.198           |
| L475     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Rear Face     | 1.0                      | Down | 4       | 23                    | 21.68                 | 0.14             | 0.172         | 0.041          | 0.233           |
| L485     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Front Face    | 1.0                      | Up   | 1       | 24                    | 23.75                 | 0.07             | 0.010         | 0.007          | 0.010           |
| L486     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Rear Face     | 1.0                      | Up   | 1       | 24                    | 23.75                 | 0.08             | 0.015         | 0.010          | 0.016           |
| L487     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Left Side     | 1.0                      | Up   | 1       | 24                    | 23.75                 | 0.02             | 0.020         | 0.013          | 0.021           |
| L488     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Top Side      | 1.0                      | Up   | 1       | 24                    | 23.75                 | 0.03             | 0.012         | 0.008          | 0.012           |
| L489     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Front Face    | 1.0                      | Up   | 1       | 23                    | 22.62                 | 0.09             | 0.007         | 0.005          | 0.008           |
| L490     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Rear Face     | 1.0                      | Up   | 1       | 23                    | 22.62                 | 0.03             | 0.012         | 0.008          | 0.013           |
| L491     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Left Side     | 1.0                      | Up   | 1       | 23                    | 22.62                 | 0.01             | 0.015         | 0.011          | 0.016           |
| L492     | LTE B17 | QPSK10M | 23780   | 25 | 12      | Top Side      | 1.0                      | Up   | 1       | 23                    | 22.62                 | 0.07             | 0.009         | 0.006          | 0.010           |
| L493     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Left Side     | 1.0                      | Up   | 2       | 24                    | 23.75                 | 0.15             | <b>0.023</b>  | <b>0.016</b>   | <b>0.024</b>    |
| L494     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Left Side     | 1.0                      | Up   | 3       | 24                    | 23.75                 | -0.13            | 0.020         | 0.014          | 0.021           |
| L495     | LTE B17 | QPSK10M | 23790   | 1  | 24      | Left Side     | 1.0                      | Up   | 4       | 24                    | 23.75                 | 0.09             | 0.021         | 0.015          | 0.022           |

| Test No. | Band    | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L505     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Front Face    | 1.0                      | Down | 1       | 24                    | 23.06                 | 0.03             | 0.135         | 0.082          | 0.168           |
| L506     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.0                      | Down | 1       | 24                    | 23.06                 | -0.02            | 0.221         | 0.131          | 0.275           |
| L507     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Left Side     | 1.0                      | Down | 1       | 24                    | 23.06                 | -0.11            | 0.058         | 0.037          | 0.071           |
| L508     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Right Side    | 1.0                      | Down | 1       | 24                    | 23.06                 | 0.09             | 0.134         | 0.089          | 0.167           |
| L509     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Bottom Side   | 1.0                      | Down | 1       | 24                    | 23.06                 | 0                | 0.192         | 0.101          | 0.239           |
| L510     | LTE B26 | QPSK15M | 26865   | 36 | 19      | Front Face    | 1.0                      | Down | 1       | 23                    | 21.94                 | 0.12             | 0.097         | 0.060          | 0.124           |
| L511     | LTE B26 | QPSK15M | 26865   | 36 | 19      | Rear Face     | 1.0                      | Down | 1       | 23                    | 21.94                 | 0.06             | 0.172         | 0.101          | 0.220           |
| L512     | LTE B26 | QPSK15M | 26865   | 36 | 19      | Left Side     | 1.0                      | Down | 1       | 23                    | 21.94                 | -0.07            | 0.063         | 0.042          | 0.080           |
| L513     | LTE B26 | QPSK15M | 26865   | 36 | 19      | Right Side    | 1.0                      | Down | 1       | 23                    | 21.94                 | 0.02             | 0.094         | 0.062          | 0.120           |
| L514     | LTE B26 | QPSK15M | 26865   | 36 | 19      | Bottom Side   | 1.0                      | Down | 1       | 23                    | 21.94                 | 0.08             | 0.142         | 0.078          | 0.181           |
| L515     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.0                      | Down | 2       | 24                    | 23.06                 | -0.09            | 0.214         | 0.123          | 0.266           |
| L516     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.0                      | Down | 3       | 24                    | 23.06                 | 0.01             | <b>0.224</b>  | <b>0.133</b>   | <b>0.278</b>    |
| L517     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.0                      | Down | 4       | 24                    | 23.06                 | 0.16             | 0.209         | 0.109          | 0.260           |
| L527     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Front Face    | 1.0                      | Up   | 1       | 24                    | 23.44                 | 0.01             | 0.090         | 0.056          | 0.102           |
| L528     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.0                      | Up   | 1       | 24                    | 23.44                 | 0                | 0.133         | 0.084          | 0.151           |
| L529     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Left Side     | 1.0                      | Up   | 1       | 24                    | 23.44                 | -0.05            | 0.081         | 0.052          | 0.093           |
| L530     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Top Side      | 1.0                      | Up   | 1       | 24                    | 23.44                 | 0.01             | 0.105         | 0.066          | 0.120           |
| L531     | LTE B26 | QPSK15M | 26965   | 36 | 0       | Front Face    | 1.0                      | Up   | 1       | 23                    | 22.37                 | 0.11             | 0.077         | 0.049          | 0.089           |
| L532     | LTE B26 | QPSK15M | 26965   | 36 | 0       | Rear Face     | 1.0                      | Up   | 1       | 23                    | 22.37                 | -0.09            | 0.122         | 0.075          | 0.141           |
| L533     | LTE B26 | QPSK15M | 26965   | 36 | 0       | Left Side     | 1.0                      | Up   | 1       | 23                    | 22.37                 | 0.04             | 0.065         | 0.043          | 0.076           |
| L534     | LTE B26 | QPSK15M | 26965   | 36 | 0       | Top Side      | 1.0                      | Up   | 1       | 23                    | 22.37                 | 0.02             | 0.112         | 0.065          | 0.130           |
| L535     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.0                      | Up   | 2       | 24                    | 23.44                 | 0.06             | 0.156         | 0.098          | 0.178           |
| L536     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.0                      | Up   | 3       | 24                    | 23.44                 | -0.03            | <b>0.168</b>  | <b>0.106</b>   | <b>0.191</b>    |
| L537     | LTE B26 | QPSK15M | 26865   | 1  | 37      | Rear Face     | 1.0                      | Up   | 4       | 24                    | 23.44                 | -0.08            | 0.164         | 0.101          | 0.187           |
| L547     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Front Face    | 1.0                      | Down | 1       | 22.5                  | 21.88                 | 0.02             | 0.187         | 0.098          | 0.216           |
| L548     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Rear Face     | 1.0                      | Down | 1       | 22.5                  | 21.88                 | -0.06            | 0.313         | 0.150          | 0.361           |
| L549     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Left Side     | 1.0                      | Down | 1       | 22.5                  | 21.88                 | -0.01            | 0.065         | 0.035          | 0.075           |
| L550     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Right Side    | 1.0                      | Down | 1       | 22.5                  | 21.88                 | 0.08             | 0.138         | 0.072          | 0.159           |
| L551     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Bottom Side   | 1.0                      | Down | 1       | 22.5                  | 21.88                 | 0.01             | 0.476         | 0.223          | 0.550           |
| L552     | LTE B38 | QPSK20M | 37850   | 50 | 25      | Front Face    | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.07             | 0.149         | 0.077          | 0.186           |
| L553     | LTE B38 | QPSK20M | 37850   | 50 | 25      | Rear Face     | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.12             | 0.263         | 0.133          | 0.329           |
| L554     | LTE B38 | QPSK20M | 37850   | 50 | 25      | Left Side     | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.03             | 0.094         | 0.050          | 0.117           |
| L555     | LTE B38 | QPSK20M | 37850   | 50 | 25      | Right Side    | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.04             | 0.134         | 0.068          | 0.167           |
| L556     | LTE B38 | QPSK20M | 37850   | 50 | 25      | Bottom Side   | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.02             | 0.457         | 0.214          | 0.571           |
| L557     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Bottom Side   | 1.0                      | Down | 2       | 22.5                  | 21.88                 | -0.02            | <b>0.539</b>  | <b>0.244</b>   | <b>0.622</b>    |
| L558     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Bottom Side   | 1.0                      | Down | 3       | 22.5                  | 21.88                 | 0.11             | 0.513         | 0.201          | 0.592           |
| L559     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Bottom Side   | 1.0                      | Down | 4       | 22.5                  | 21.88                 | -0.08            | 0.534         | 0.231          | 0.617           |

| Test No. | Band    | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L569     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Front Face    | 1.0                      | Up   | 1       | 20                    | 19.89                 | 0.03             | 0.166         | 0.087          | 0.170           |
| L570     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Rear Face     | 1.0                      | Up   | 1       | 20                    | 19.89                 | 0.01             | 0.459         | 0.189          | 0.471           |
| L571     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Left Side     | 1.0                      | Up   | 1       | 20                    | 19.89                 | -0.14            | 0.163         | 0.083          | 0.167           |
| L572     | LTE B38 | QPSK20M | 38000   | 1  | 50      | Top Side      | 1.0                      | Up   | 1       | 20                    | 19.89                 | 0.06             | 0.546         | 0.220          | 0.560           |
| L573     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Front Face    | 1.0                      | Up   | 1       | 20                    | 19.43                 | 0                | 0.182         | 0.086          | 0.208           |
| L574     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Rear Face     | 1.0                      | Up   | 1       | 20                    | 19.43                 | 0.02             | 0.426         | 0.191          | 0.486           |
| L575     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Left Side     | 1.0                      | Up   | 1       | 20                    | 19.43                 | 0.17             | 0.160         | 0.080          | 0.183           |
| L576     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Top Side      | 1.0                      | Up   | 1       | 20                    | 19.43                 | 0                | 0.603         | 0.244          | 0.688           |
| L577     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Top Side      | 1.0                      | Up   | 2       | 20                    | 19.43                 | 0.01             | 0.612         | 0.250          | 0.699           |
| L578     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Top Side      | 1.0                      | Up   | 3       | 20                    | 19.43                 | 0.12             | <b>0.617</b>  | <b>0.252</b>   | <b>0.704</b>    |
| L579     | LTE B38 | QPSK20M | 37850   | 50 | 0       | Top Side      | 1.0                      | Up   | 4       | 20                    | 19.43                 | 0.18             | 0.608         | 0.248          | 0.694           |
| L589     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Front Face    | 1.0                      | Down | 1       | 22.5                  | 21.90                 | 0.03             | 0.226         | 0.123          | 0.260           |
| L590     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Rear Face     | 1.0                      | Down | 1       | 22.5                  | 21.90                 | -0.11            | 0.297         | 0.152          | 0.341           |
| L591     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Left Side     | 1.0                      | Down | 1       | 22.5                  | 21.90                 | 0.02             | 0.145         | 0.076          | 0.167           |
| L592     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Right Side    | 1.0                      | Down | 1       | 22.5                  | 21.90                 | 0.01             | 0.095         | 0.052          | 0.109           |
| L593     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Bottom Side   | 1.0                      | Down | 1       | 22.5                  | 21.90                 | -0.04            | <b>0.489</b>  | <b>0.227</b>   | <b>0.562</b>    |
| L594     | LTE B41 | QPSK20M | 41140   | 50 | 25      | Front Face    | 1.0                      | Down | 1       | 22.5                  | 21.72                 | 0                | 0.209         | 0.116          | 0.250           |
| L595     | LTE B41 | QPSK20M | 41140   | 50 | 25      | Rear Face     | 1.0                      | Down | 1       | 22.5                  | 21.72                 | 0.15             | 0.296         | 0.144          | 0.355           |
| L596     | LTE B41 | QPSK20M | 41140   | 50 | 25      | Left Side     | 1.0                      | Down | 1       | 22.5                  | 21.72                 | 0.02             | 0.104         | 0.056          | 0.125           |
| L597     | LTE B41 | QPSK20M | 41140   | 50 | 25      | Right Side    | 1.0                      | Down | 1       | 22.5                  | 21.72                 | -0.09            | 0.087         | 0.045          | 0.104           |
| L598     | LTE B41 | QPSK20M | 41140   | 50 | 25      | Bottom Side   | 1.0                      | Down | 1       | 22.5                  | 21.72                 | -0.01            | 0.465         | 0.214          | 0.557           |
| L599     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Bottom Side   | 1.0                      | Down | 2       | 22.5                  | 21.90                 | 0.17             | 0.481         | 0.218          | 0.553           |
| L600     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Bottom Side   | 1.0                      | Down | 3       | 22.5                  | 21.90                 | 0.12             | 0.471         | 0.219          | 0.541           |
| L601     | LTE B41 | QPSK20M | 41140   | 1  | 50      | Bottom Side   | 1.0                      | Down | 4       | 22.5                  | 21.90                 | 0                | 0.467         | 0.217          | 0.536           |
| L611     | LTE B41 | QPSK20M | 40440   | 1  | 50      | Front Face    | 1.0                      | Up   | 1       | 20                    | 19.75                 | 0.03             | 0.093         | 0.088          | 0.099           |
| L612     | LTE B41 | QPSK20M | 40440   | 1  | 50      | Rear Face     | 1.0                      | Up   | 1       | 20                    | 19.75                 | 0.11             | 0.440         | 0.197          | 0.466           |
| L613     | LTE B41 | QPSK20M | 40440   | 1  | 50      | Left Side     | 1.0                      | Up   | 1       | 20                    | 19.75                 | -0.01            | 0.147         | 0.079          | 0.156           |
| L614     | LTE B41 | QPSK20M | 40440   | 1  | 50      | Top Side      | 1.0                      | Up   | 1       | 20                    | 19.75                 | 0.03             | 0.625         | 0.254          | 0.661           |
| L615     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Front Face    | 1.0                      | Up   | 1       | 20                    | 19.41                 | -0.09            | 0.167         | 0.082          | 0.191           |
| L616     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Rear Face     | 1.0                      | Up   | 1       | 20                    | 19.41                 | 0.04             | 0.469         | 0.196          | 0.537           |
| L617     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Left Side     | 1.0                      | Up   | 1       | 20                    | 19.41                 | -0.02            | 0.145         | 0.076          | 0.166           |
| L618     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Top Side      | 1.0                      | Up   | 1       | 20                    | 19.41                 | 0.05             | 0.606         | 0.244          | 0.694           |
| L619     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Top Side      | 1.0                      | Up   | 2       | 20                    | 19.41                 | 0.17             | 0.641         | 0.257          | 0.734           |
| L620     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Top Side      | 1.0                      | Up   | 3       | 20                    | 19.41                 | 0.05             | 0.628         | 0.231          | 0.719           |
| L621     | LTE B41 | QPSK20M | 40440   | 50 | 50      | Top Side      | 1.0                      | Up   | 4       | 20                    | 19.41                 | 0.09             | <b>0.649</b>  | <b>0.264</b>   | <b>0.743</b>    |

| Test No. | Band    | Mode    | Channel | RB | off set | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------|----|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| L631     | LTE B66 | QPSK20M | 132072  | 1  | 50      | Front Face    | 1.0                      | Down | 1       | 21                    | 20.81                 | 0.08             | 0.130         | 0.085          | 0.136           |
| L632     | LTE B66 | QPSK20M | 132072  | 1  | 50      | Rear Face     | 1.0                      | Down | 1       | 21                    | 20.81                 | -0.01            | 0.411         | 0.239          | 0.429           |
| L633     | LTE B66 | QPSK20M | 132072  | 1  | 50      | Left Side     | 1.0                      | Down | 1       | 21                    | 20.81                 | 0.07             | 0.080         | 0.049          | 0.084           |
| L634     | LTE B66 | QPSK20M | 132072  | 1  | 50      | Right Side    | 1.0                      | Down | 1       | 21                    | 20.81                 | 0.03             | 0.062         | 0.038          | 0.065           |
| L635     | LTE B66 | QPSK20M | 132072  | 1  | 50      | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.81                 | 0.02             | 0.542         | 0.305          | 0.566           |
| L636     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Front Face    | 1.0                      | Down | 1       | 21                    | 20.51                 | -0.04            | 0.146         | 0.092          | 0.164           |
| L637     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Rear Face     | 1.0                      | Down | 1       | 21                    | 20.51                 | 0.11             | 0.427         | 0.245          | 0.478           |
| L638     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Left Side     | 1.0                      | Down | 1       | 21                    | 20.51                 | 0.01             | 0.071         | 0.040          | 0.079           |
| L639     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Right Side    | 1.0                      | Down | 1       | 21                    | 20.51                 | 0.15             | 0.043         | 0.026          | 0.048           |
| L640     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.51                 | 0                | <b>0.571</b>  | <b>0.319</b>   | <b>0.640</b>    |
| L651     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Bottom Side   | 1.0                      | Down | 2       | 21                    | 20.51                 | 0.06             | 0.562         | 0.306          | 0.630           |
| L652     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Bottom Side   | 1.0                      | Down | 3       | 21                    | 20.51                 | -0.09            | 0.549         | 0.301          | 0.615           |
| L653     | LTE B66 | QPSK20M | 132272  | 50 | 0       | Bottom Side   | 1.0                      | Down | 4       | 21                    | 20.51                 | -0.04            | 0.534         | 0.298          | 0.598           |
| L663     | LTE B66 | QPSK20M | 132272  | 1  | 50      | Front Face    | 1.0                      | Up   | 1       | 21                    | 20.88                 | 0.02             | 0.290         | 0.159          | 0.298           |
| L664     | LTE B66 | QPSK20M | 132272  | 1  | 50      | Rear Face     | 1.0                      | Up   | 1       | 21                    | 20.88                 | 0.06             | 0.463         | 0.254          | 0.475           |
| L665     | LTE B66 | QPSK20M | 132272  | 1  | 50      | Left Side     | 1.0                      | Up   | 1       | 21                    | 20.88                 | -0.02            | 0.162         | 0.093          | 0.166           |
| L666     | LTE B66 | QPSK20M | 132272  | 1  | 50      | Top Side      | 1.0                      | Up   | 1       | 21                    | 20.88                 | -0.03            | 0.457         | 0.242          | 0.469           |
| L667     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Front Face    | 1.0                      | Up   | 1       | 21                    | 20.81                 | 0.12             | 0.278         | 0.157          | 0.290           |
| L668     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Rear Face     | 1.0                      | Up   | 1       | 21                    | 20.81                 | 0.08             | 0.452         | 0.249          | 0.472           |
| L669     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Left Side     | 1.0                      | Up   | 1       | 21                    | 20.81                 | 0.17             | 0.116         | 0.067          | 0.121           |
| L670     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Top Side      | 1.0                      | Up   | 1       | 21                    | 20.81                 | -0.02            | <b>0.465</b>  | <b>0.246</b>   | <b>0.486</b>    |
| L671     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Top Side      | 1.0                      | Up   | 2       | 21                    | 20.81                 | 0.06             | 0.453         | 0.234          | 0.473           |
| L672     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Top Side      | 1.0                      | Up   | 3       | 21                    | 20.81                 | 0.19             | 0.448         | 0.229          | 0.468           |
| L673     | LTE B66 | QPSK20M | 132272  | 50 | 25      | Top Side      | 1.0                      | Up   | 4       | 21                    | 20.81                 | -0.04            | 0.463         | 0.245          | 0.483           |

Note: The value with boldface is the maximum SAR Value of each test band.

#### 4. Hotspot SAR test results of 2.4G WiFi

WiFi only

| Test No. | Band    | Channel | Test Position | Separation Distance (cm) | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------------|--------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W38      | 802.11b | 6       | Front Face    | 1                        | 1       | 1         | 18                    | 16.77                 | 0.06             | 0.137         | 0.074          | 0.182           |
| W39      | 802.11b | 6       | Rear Face     | 1                        | 1       | 1         | 18                    | 16.77                 | 0.02             | <b>0.210</b>  | <b>0.102</b>   | <b>0.279</b>    |
| W40      | 802.11b | 6       | Right Side    | 1                        | 1       | 1         | 18                    | 16.77                 | -0.01            | 0.143         | 0.073          | 0.190           |
| W41      | 802.11b | 6       | Top Side      | 1                        | 1       | 1         | 18                    | 16.77                 | 0.07             | 0.122         | 0.062          | 0.162           |
| W42      | 802.11b | 6       | Rear Face     | 1                        | 2       | 1         | 18                    | 16.77                 | 0.11             | 0.178         | 0.092          | 0.236           |
| W43      | 802.11b | 6       | Rear Face     | 1                        | 3       | 1         | 18                    | 16.77                 | 0.04             | 0.153         | 0.072          | 0.203           |
| W44      | 802.11b | 6       | Rear Face     | 1                        | 4       | 1         | 18                    | 16.77                 | -0.18            | 0.167         | 0.087          | 0.222           |

Note: The value with boldface is the maximum SAR Value of each test band.

#### 5. Hotspot SAR test results of 5G WiFi

WiFi only

| Test No. | Band    | Channel | Test Position | Separation Distance (cm) | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------------|--------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W87      | 802.11a | 48      | Front Face    | 1                        | 1       | 6         | 13                    | 11.68                 | 0.01             | 0.106         | 0.021          | 0.144           |
| W88      | 802.11a | 48      | Rear Face     | 1                        | 1       | 6         | 13                    | 11.68                 | 0.13             | 0.119         | 0.038          | 0.161           |
| W89      | 802.11a | 48      | Right Side    | 1                        | 1       | 6         | 13                    | 11.68                 | -0.02            | <0.001        | <0.001         | <0.001          |
| W90      | 802.11a | 48      | Top Side      | 1                        | 1       | 6         | 13                    | 11.68                 | 0.15             | <b>0.267</b>  | <b>0.079</b>   | <b>0.362</b>    |
| W91      | 802.11a | 48      | Top Side      | 1                        | 2       | 6         | 13                    | 11.68                 | -0.01            | 0.245         | 0.074          | 0.332           |
| W92      | 802.11a | 48      | Top Side      | 1                        | 3       | 6         | 13                    | 11.68                 | 0.06             | 0.261         | 0.078          | 0.354           |
| W93      | 802.11a | 48      | Top Side      | 1                        | 4       | 6         | 13                    | 11.68                 | 0.04             | 0.259         | 0.077          | 0.351           |
| W80      | 802.11a | 149     | Front Face    | 1                        | 1       | 6         | 11                    | 9.89                  | 0.03             | 0.100         | 0.034          | 0.129           |
| W81      | 802.11a | 149     | Rear Face     | 1                        | 1       | 6         | 11                    | 9.89                  | 0.01             | 0.111         | 0.036          | 0.143           |
| W82      | 802.11a | 149     | Right Side    | 1                        | 1       | 6         | 11                    | 9.89                  | -0.04            | 0.028         | 0.010          | 0.036           |
| W83      | 802.11a | 149     | Top Side      | 1                        | 1       | 6         | 11                    | 9.89                  | -0.08            | <b>0.348</b>  | <b>0.095</b>   | <b>0.449</b>    |
| W84      | 802.11a | 149     | Top Side      | 1                        | 2       | 6         | 11                    | 9.89                  | 0.06             | 0.321         | 0.086          | 0.414           |
| W85      | 802.11a | 149     | Top Side      | 1                        | 3       | 6         | 11                    | 9.89                  | -0.18            | 0.293         | 0.081          | 0.378           |
| W86      | 802.11a | 149     | Top Side      | 1                        | 4       | 6         | 11                    | 9.89                  | 0.07             | 0.312         | 0.070          | 0.403           |

Note: The value with boldface is the maximum SAR Value of each test band.

Note: Per KDB248227 D01, the highest SAR measured for the initial test position or initial test configuration should be used to determine SAR test exclusion according to the sum of 1-g SAR and SAR peak to location ratio provisions in KDB 447498. In addition, a test lab may also choose to perform standalone SAR measurements for test positions and 802.11 configurations that are not required by the initial test position or initial test configuration procedures and apply the results to determine simultaneous transmission SAR test exclusion, according to sum of 1-g and SAR peak to location ratio requirements to reduce the number of simultaneous transmission SAR measurements.

## 7.2.4 SAR MEASUREMENT RESULT OF PRODUCT SPECIFIC 10-G SAR

Per KDB648474D04, when hotspot mode applies, product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

| Test No. | Band     | Mode    | Channel | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|----------|---------|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| G38      | GSM 850  | GPRS2TX | 190     | Front Face    | 1.0                      | Down | 1       | 31                    | 29.66                 | 0.03             | 0.080         | 0.056          | 0.109           | YES                                 |
| G39      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Down | 1       | 31                    | 29.66                 | 0.04             | 0.166         | 0.099          | 0.226           | YES                                 |
| G40      | GSM 850  | GPRS2TX | 190     | Left Side     | 1.0                      | Down | 1       | 31                    | 29.66                 | 0                | 0.044         | 0.031          | 0.059           | YES                                 |
| G41      | GSM 850  | GPRS2TX | 190     | Right Side    | 1.0                      | Down | 1       | 31                    | 29.66                 | 0.08             | 0.093         | 0.063          | 0.126           | YES                                 |
| G42      | GSM 850  | GPRS2TX | 190     | Bottom Side   | 1.0                      | Down | 1       | 31                    | 29.66                 | 0.01             | 0.150         | 0.080          | 0.204           | YES                                 |
| G43      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Down | 2       | 31                    | 29.66                 | -0.06            | 0.159         | 0.089          | 0.216           | YES                                 |
| G44      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Down | 3       | 31                    | 29.66                 | 0.03             | 0.178         | 0.119          | 0.242           | YES                                 |
| G45      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Down | 4       | 31                    | 29.66                 | -0.11            | <b>0.216</b>  | <b>0.128</b>   | <b>0.294</b>    | YES                                 |
| G53      | GSM 850  | GPRS2TX | 190     | Front Face    | 1.0                      | Up   | 1       | 32                    | 30.27                 | 0                | 0.106         | 0.070          | 0.158           | YES                                 |
| G54      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Up   | 1       | 32                    | 30.27                 | -0.08            | 0.155         | 0.101          | 0.231           | YES                                 |
| G55      | GSM 850  | GPRS2TX | 190     | Left Side     | 1.0                      | Up   | 1       | 32                    | 30.27                 | 0.03             | 0.069         | 0.048          | 0.103           | YES                                 |
| G56      | GSM 850  | GPRS2TX | 190     | Top Side      | 1.0                      | Up   | 1       | 32                    | 30.27                 | -0.01            | 0.149         | 0.092          | 0.222           | YES                                 |
| G57      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Up   | 2       | 32                    | 30.27                 | -0.07            | <b>0.190</b>  | <b>0.123</b>   | <b>0.283</b>    | YES                                 |
| G58      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Up   | 3       | 32                    | 30.27                 | 0.1              | 0.152         | 0.099          | 0.226           | YES                                 |
| G59      | GSM 850  | GPRS2TX | 190     | Rear Face     | 1.0                      | Up   | 4       | 32                    | 30.27                 | -0.04            | 0.144         | 0.094          | 0.214           | YES                                 |
| G67      | GSM 1900 | GPRS4TX | 661     | Front Face    | 1.0                      | Down | 1       | 24                    | 22.51                 | 0.03             | 0.162         | 0.099          | 0.228           | YES                                 |
| G68      | GSM 1900 | GPRS4TX | 661     | Rear Face     | 1.0                      | Down | 1       | 24                    | 22.51                 | 0.13             | 0.423         | 0.236          | 0.596           | YES                                 |
| G69      | GSM 1900 | GPRS4TX | 661     | Left Side     | 1.0                      | Down | 1       | 24                    | 22.51                 | -0.01            | 0.080         | 0.042          | 0.112           | YES                                 |
| G70      | GSM 1900 | GPRS4TX | 661     | Right Side    | 1.0                      | Down | 1       | 24                    | 22.51                 | 0.05             | 0.039         | 0.022          | 0.055           | YES                                 |
| G71      | GSM 1900 | GPRS4TX | 661     | Bottom Side   | 1.0                      | Down | 1       | 24                    | 22.51                 | 0.02             | <b>0.496</b>  | <b>0.265</b>   | <b>0.699</b>    | YES                                 |
| G72      | GSM 1900 | GPRS4TX | 661     | Bottom Side   | 1.0                      | Down | 2       | 24                    | 22.51                 | 0.07             | 0.487         | 0.258          | 0.686           | YES                                 |
| G73      | GSM 1900 | GPRS4TX | 661     | Bottom Side   | 1.0                      | Down | 3       | 24                    | 22.51                 | 0.03             | 0.445         | 0.238          | 0.627           | YES                                 |
| G74      | GSM 1900 | GPRS4TX | 661     | Bottom Side   | 1.0                      | Down | 4       | 24                    | 22.51                 | 0.01             | 0.472         | 0.247          | 0.665           | YES                                 |
| G82      | GSM 1900 | GPRS4TX | 661     | Front Face    | 1.0                      | Up   | 1       | 24.5                  | 22.67                 | 0                | 0.183         | 0.098          | 0.279           | YES                                 |
| G83      | GSM 1900 | GPRS4TX | 661     | Rear Face     | 1.0                      | Up   | 1       | 24.5                  | 22.67                 | 0.11             | 0.291         | 0.155          | 0.443           | YES                                 |
| G84      | GSM 1900 | GPRS4TX | 661     | Left Side     | 1.0                      | Up   | 1       | 24.5                  | 22.67                 | 0.01             | 0.086         | 0.045          | 0.131           | YES                                 |
| G85      | GSM 1900 | GPRS4TX | 661     | Top Side      | 1.0                      | Up   | 1       | 24.5                  | 22.67                 | -0.03            | 0.384         | 0.184          | 0.585           | YES                                 |
| G86      | GSM 1900 | GPRS4TX | 661     | Top Side      | 1.0                      | Up   | 2       | 24.5                  | 22.67                 | -0.04            | 0.380         | 0.181          | 0.579           | YES                                 |
| G87      | GSM 1900 | GPRS4TX | 661     | Top Side      | 1.0                      | Up   | 3       | 24.5                  | 22.67                 | -0.02            | <b>0.387</b>  | <b>0.189</b>   | <b>0.590</b>    | YES                                 |
| G88      | GSM 1900 | GPRS4TX | 661     | Top Side      | 1.0                      | Up   | 4       | 24.5                  | 22.67                 | 0.01             | 0.374         | 0.178          | 0.570           | YES                                 |

| Test No. | Band    | Mode     | Channel | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|---------|----------|---------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| U54      | UMTS B2 | RMC12.2K | 9400    | Front Face    | 1.0                      | Down | 1       | 20.5                  | 19.38                 | 0.03             | 0.160         | 0.100          | 0.207           | YES                                 |
| U55      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.0                      | Down | 1       | 20.5                  | 19.38                 | 0.02             | 0.419         | 0.238          | 0.542           | YES                                 |
| U56      | UMTS B2 | RMC12.2K | 9400    | Left Side     | 1.0                      | Down | 1       | 20.5                  | 19.38                 | 0.05             | 0.075         | 0.042          | 0.097           | YES                                 |
| U57      | UMTS B2 | RMC12.2K | 9400    | Right Side    | 1.0                      | Down | 1       | 20.5                  | 19.38                 | 0.14             | 0.023         | 0.005          | 0.030           | YES                                 |
| U58      | UMTS B2 | RMC12.2K | 9400    | Bottom Side   | 1.0                      | Down | 1       | 20.5                  | 19.38                 | -0.01            | <b>0.486</b>  | <b>0.266</b>   | <b>0.629</b>    | YES                                 |
| U59      | UMTS B2 | RMC12.2K | 9400    | Bottom Side   | 1.0                      | Down | 2       | 20.5                  | 19.38                 | 0.08             | 0.477         | 0.257          | 0.617           | YES                                 |
| U60      | UMTS B2 | RMC12.2K | 9400    | Bottom Side   | 1.0                      | Down | 3       | 20.5                  | 19.38                 | 0.03             | 0.485         | 0.264          | 0.628           | YES                                 |
| U61      | UMTS B2 | RMC12.2K | 9400    | Bottom Side   | 1.0                      | Down | 4       | 20.5                  | 19.38                 | -0.03            | 0.474         | 0.258          | 0.613           | YES                                 |
| U69      | UMTS B2 | RMC12.2K | 9400    | Front Face    | 1.0                      | Up   | 1       | 20.5                  | 19.76                 | 0.02             | 0.241         | 0.128          | 0.286           | YES                                 |
| U70      | UMTS B2 | RMC12.2K | 9400    | Rear Face     | 1.0                      | Up   | 1       | 20.5                  | 19.76                 | 0.09             | 0.424         | 0.227          | 0.503           | YES                                 |
| U71      | UMTS B2 | RMC12.2K | 9400    | Left Side     | 1.0                      | Up   | 1       | 20.5                  | 19.76                 | 0.12             | 0.109         | 0.059          | 0.129           | YES                                 |
| U72      | UMTS B2 | RMC12.2K | 9400    | Top Side      | 1.0                      | Up   | 1       | 20.5                  | 19.76                 | 0.02             | 0.447         | 0.224          | 0.530           | YES                                 |
| U73      | UMTS B2 | RMC12.2K | 9400    | Top Side      | 1.0                      | Up   | 2       | 20.5                  | 19.76                 | 0                | 0.432         | 0.230          | 0.512           | YES                                 |
| U74      | UMTS B2 | RMC12.2K | 9400    | Top Side      | 1.0                      | Up   | 3       | 20.5                  | 19.76                 | 0.06             | <b>0.504</b>  | <b>0.251</b>   | <b>0.598</b>    | YES                                 |
| U75      | UMTS B2 | RMC12.2K | 9400    | Top Side      | 1.0                      | Up   | 4       | 20.5                  | 19.76                 | -0.04            | 0.464         | 0.239          | 0.550           | YES                                 |
| U83      | UMTS B4 | RMC12.2K | 1413    | Front Face    | 1.0                      | Down | 1       | 21                    | 19.75                 | 0.08             | 0.139         | 0.088          | 0.185           | YES                                 |
| U84      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.0                      | Down | 1       | 21                    | 19.75                 | 0.09             | 0.483         | 0.278          | 0.644           | YES                                 |
| U85      | UMTS B4 | RMC12.2K | 1413    | Left Side     | 1.0                      | Down | 1       | 21                    | 19.75                 | -0.12            | 0.099         | 0.061          | 0.132           | YES                                 |
| U86      | UMTS B4 | RMC12.2K | 1413    | Right Side    | 1.0                      | Down | 1       | 21                    | 19.75                 | 0.06             | 0.045         | 0.027          | 0.060           | YES                                 |
| U87      | UMTS B4 | RMC12.2K | 1413    | Bottom Side   | 1.0                      | Down | 1       | 21                    | 19.75                 | 0.01             | 0.509         | 0.284          | 0.679           | YES                                 |
| U88      | UMTS B4 | RMC12.2K | 1413    | Bottom Side   | 1.0                      | Down | 2       | 21                    | 19.75                 | 0.01             | <b>0.510</b>  | <b>0.287</b>   | <b>0.680</b>    | YES                                 |
| U89      | UMTS B4 | RMC12.2K | 1413    | Bottom Side   | 1.0                      | Down | 3       | 21                    | 19.75                 | 0.13             | 0.501         | 0.278          | 0.668           | YES                                 |
| U90      | UMTS B4 | RMC12.2K | 1413    | Bottom Side   | 1.0                      | Down | 4       | 21                    | 19.75                 | -0.07            | 0.506         | 0.282          | 0.675           | YES                                 |
| U98      | UMTS B4 | RMC12.2K | 1413    | Front Face    | 1.0                      | Up   | 1       | 21                    | 20.14                 | 0.01             | 0.208         | 0.118          | 0.254           | YES                                 |
| U99      | UMTS B4 | RMC12.2K | 1413    | Rear Face     | 1.0                      | Up   | 1       | 21                    | 20.14                 | 0.07             | 0.294         | 0.164          | 0.358           | YES                                 |
| U100     | UMTS B4 | RMC12.2K | 1413    | Left Side     | 1.0                      | Up   | 1       | 21                    | 20.14                 | 0.06             | 0.085         | 0.048          | 0.104           | YES                                 |
| U101     | UMTS B4 | RMC12.2K | 1413    | Top Side      | 1.0                      | Up   | 1       | 21                    | 20.14                 | 0.03             | 0.425         | 0.222          | 0.518           | YES                                 |
| U102     | UMTS B4 | RMC12.2K | 1413    | Top Side      | 1.0                      | Up   | 2       | 21                    | 20.14                 | 0.11             | 0.431         | 0.213          | 0.525           | YES                                 |
| U103     | UMTS B4 | RMC12.2K | 1413    | Top Side      | 1.0                      | Up   | 3       | 21                    | 20.14                 | -0.01            | <b>0.439</b>  | <b>0.233</b>   | <b>0.535</b>    | YES                                 |
| U104     | UMTS B4 | RMC12.2K | 1413    | Top Side      | 1.0                      | Up   | 4       | 21                    | 20.14                 | -0.09            | 0.413         | 0.239          | 0.503           | YES                                 |
| U112     | UMTS B5 | RMC12.2K | 4182    | Front Face    | 1.0                      | Down | 1       | 24                    | 22.62                 | 0.06             | 0.113         | 0.070          | 0.155           | YES                                 |
| U113     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Down | 1       | 24                    | 22.62                 | 0.04             | <b>0.219</b>  | <b>0.129</b>   | <b>0.301</b>    | YES                                 |
| U114     | UMTS B5 | RMC12.2K | 4182    | Left Side     | 1.0                      | Down | 1       | 24                    | 22.62                 | 0.12             | 0.066         | 0.044          | 0.090           | YES                                 |
| U115     | UMTS B5 | RMC12.2K | 4182    | Right Side    | 1.0                      | Down | 1       | 24                    | 22.62                 | 0.1              | 0.116         | 0.076          | 0.159           | YES                                 |
| U116     | UMTS B5 | RMC12.2K | 4182    | Bottom Side   | 1.0                      | Down | 1       | 24                    | 22.62                 | -0.03            | 0.186         | 0.099          | 0.256           | YES                                 |
| U117     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Down | 2       | 24                    | 22.62                 | 0.07             | 0.205         | 0.114          | 0.282           | YES                                 |
| U118     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Down | 3       | 24                    | 22.62                 | 0.03             | 0.209         | 0.114          | 0.287           | YES                                 |
| U119     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Down | 4       | 24                    | 22.62                 | 0.02             | 0.202         | 0.108          | 0.278           | YES                                 |
| U127     | UMTS B5 | RMC12.2K | 4182    | Front Face    | 1.0                      | Up   | 1       | 24                    | 22.87                 | 0.12             | 0.073         | 0.044          | 0.095           | YES                                 |
| U128     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Up   | 1       | 24                    | 22.87                 | 0                | 0.110         | 0.070          | 0.143           | YES                                 |
| U129     | UMTS B5 | RMC12.2K | 4182    | Left Side     | 1.0                      | Up   | 1       | 24                    | 22.87                 | 0.01             | 0.057         | 0.036          | 0.074           | YES                                 |
| U130     | UMTS B5 | RMC12.2K | 4182    | Top Side      | 1.0                      | Up   | 1       | 24                    | 22.87                 | 0.02             | 0.098         | 0.061          | 0.127           | YES                                 |
| U131     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Up   | 2       | 24                    | 22.87                 | 0.09             | 0.128         | 0.083          | 0.166           | YES                                 |
| U132     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Up   | 3       | 24                    | 22.87                 | 0                | <b>0.157</b>  | <b>0.100</b>   | <b>0.204</b>    | YES                                 |
| U133     | UMTS B5 | RMC12.2K | 4182    | Rear Face     | 1.0                      | Up   | 4       | 24                    | 22.87                 | -0.06            | 0.142         | 0.091          | 0.184           | YES                                 |

| Test No. | Band   | Mode    | Channel | RB  | offset | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|--------|---------|---------|-----|--------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| L247     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Front Face    | 1.0                      | Down | 1       | 20.5                  | 20.04                 | 0.16             | 0.186         | 0.116          | 0.207           | YES                                 |
| L248     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Rear Face     | 1.0                      | Down | 1       | 20.5                  | 20.04                 | -0.05            | 0.456         | 0.268          | 0.507           | YES                                 |
| L249     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Left Side     | 1.0                      | Down | 1       | 20.5                  | 20.04                 | 0.02             | 0.065         | 0.034          | 0.072           | YES                                 |
| L250     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Right Side    | 1.0                      | Down | 1       | 20.5                  | 20.04                 | 0.04             | 0.048         | 0.029          | 0.053           | YES                                 |
| L251     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Bottom Side   | 1.0                      | Down | 1       | 20.5                  | 20.04                 | 0.06             | 0.562         | 0.308          | 0.625           | YES                                 |
| L252     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Front Face    | 1.0                      | Down | 1       | 20.5                  | 19.72                 | -0.05            | 0.193         | 0.119          | 0.231           | YES                                 |
| L253     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Rear Face     | 1.0                      | Down | 1       | 20.5                  | 19.72                 | 0.08             | 0.471         | 0.267          | 0.563           | YES                                 |
| L254     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Left Side     | 1.0                      | Down | 1       | 20.5                  | 19.72                 | -0.15            | 0.095         | 0.049          | 0.114           | YES                                 |
| L255     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Right Side    | 1.0                      | Down | 1       | 20.5                  | 19.72                 | 0.01             | 0.053         | 0.032          | 0.063           | YES                                 |
| L256     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Bottom Side   | 1.0                      | Down | 1       | 20.5                  | 19.72                 | 0.01             | <b>0.554</b>  | <b>0.300</b>   | <b>0.662</b>    | YES                                 |
| L257     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Bottom Side   | 1.0                      | Down | 2       | 20.5                  | 19.72                 | 0                | 0.505         | 0.276          | 0.604           | YES                                 |
| L258     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Bottom Side   | 1.0                      | Down | 3       | 20.5                  | 19.72                 | 0.13             | 0.543         | 0.296          | 0.649           | YES                                 |
| L259     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Bottom Side   | 1.0                      | Down | 4       | 20.5                  | 19.72                 | -0.09            | 0.539         | 0.283          | 0.644           | YES                                 |
| L269     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Front Face    | 1.0                      | Up   | 1       | 20.5                  | 20.35                 | -0.02            | 0.278         | 0.149          | 0.287           | YES                                 |
| L270     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Rear Face     | 1.0                      | Up   | 1       | 20.5                  | 20.35                 | 0.09             | 0.383         | 0.207          | 0.396           | YES                                 |
| L271     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Left Side     | 1.0                      | Up   | 1       | 20.5                  | 20.35                 | 0.13             | 0.111         | 0.060          | 0.115           | YES                                 |
| L272     | LTE B2 | QPSK20M | 18700   | 1   | 50     | Top Side      | 1.0                      | Up   | 1       | 20.5                  | 20.35                 | 0                | 0.502         | 0.252          | 0.519           | YES                                 |
| L273     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Front Face    | 1.0                      | Up   | 1       | 20.5                  | 20.25                 | 0.18             | 0.284         | 0.154          | 0.301           | YES                                 |
| L274     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Rear Face     | 1.0                      | Up   | 1       | 20.5                  | 20.25                 | -0.06            | 0.404         | 0.217          | 0.428           | YES                                 |
| L275     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Left Side     | 1.0                      | Up   | 1       | 20.5                  | 20.25                 | -0.13            | 0.117         | 0.064          | 0.124           | YES                                 |
| L276     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Top Side      | 1.0                      | Up   | 1       | 20.5                  | 20.25                 | 0.01             | <b>0.521</b>  | <b>0.256</b>   | <b>0.551</b>    | YES                                 |
| L277     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Top Side      | 1.0                      | Up   | 2       | 20.5                  | 20.25                 | 0.08             | 0.506         | 0.249          | 0.536           | YES                                 |
| L278     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Top Side      | 1.0                      | Up   | 3       | 20.5                  | 20.25                 | 0.14             | 0.513         | 0.255          | 0.543           | YES                                 |
| L279     | LTE B2 | QPSK20M | 19100   | 50  | 25     | Top Side      | 1.0                      | Up   | 4       | 20.5                  | 20.25                 | -0.02            | 0.510         | 0.254          | 0.540           | YES                                 |
| L289     | LTE B4 | QPSK20M | 20050   | 1   | 50     | Front Face    | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.03             | 0.173         | 0.110          | 0.204           | YES                                 |
| L290     | LTE B4 | QPSK20M | 20050   | 1   | 50     | Rear Face     | 1.0                      | Down | 1       | 21                    | 20.28                 | -0.12            | 0.565         | 0.331          | 0.667           | YES                                 |
| L291     | LTE B4 | QPSK20M | 20050   | 1   | 50     | Left Side     | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.09             | 0.062         | 0.037          | 0.073           | YES                                 |
| L292     | LTE B4 | QPSK20M | 20050   | 1   | 50     | Right Side    | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.02             | 0.060         | 0.039          | 0.070           | YES                                 |
| L293     | LTE B4 | QPSK20M | 20050   | 1   | 50     | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.01             | 0.643         | 0.356          | 0.759           | YES                                 |
| L294     | LTE B4 | QPSK20M | 20175   | 50  | 0      | Front Face    | 1.0                      | Down | 1       | 21                    | 19.97                 | 0.05             | 0.177         | 0.112          | 0.224           | YES                                 |
| L295     | LTE B4 | QPSK20M | 20175   | 50  | 0      | Rear Face     | 1.0                      | Down | 1       | 21                    | 19.97                 | 0.08             | 0.531         | 0.305          | 0.672           | YES                                 |
| L296     | LTE B4 | QPSK20M | 20175   | 50  | 0      | Left Side     | 1.0                      | Down | 1       | 21                    | 19.97                 | -0.11            | 0.061         | 0.038          | 0.077           | YES                                 |
| L297     | LTE B4 | QPSK20M | 20175   | 50  | 0      | Right Side    | 1.0                      | Down | 1       | 21                    | 19.97                 | 0.05             | 0.050         | 0.031          | 0.063           | YES                                 |
| L298     | LTE B4 | QPSK20M | 20175   | 50  | 0      | Bottom Side   | 1.0                      | Down | 1       | 21                    | 19.97                 | 0.02             | <b>0.630</b>  | <b>0.346</b>   | <b>0.798</b>    | YES                                 |
| L299     | LTE B4 | QPSK20M | 20050   | 50  | 25     | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.28                 | 0.05             | 0.647         | 0.358          | 0.764           | YES                                 |
| L300     | LTE B4 | QPSK20M | 20300   | 50  | 25     | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.27                 | 0.05             | 0.634         | 0.350          | 0.750           | YES                                 |
| L301     | LTE B4 | QPSK20M | 20175   | 100 | 0      | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.32                 | 0.02             | 0.633         | 0.350          | 0.741           | YES                                 |
| L302     | LTE B4 | QPSK20M | 20175   | 50  | 0      | Bottom Side   | 1.0                      | Down | 2       | 21                    | 19.97                 | -0.06            | 0.621         | 0.320          | 0.786           | YES                                 |
| L303     | LTE B4 | QPSK20M | 20175   | 50  | 0      | Bottom Side   | 1.0                      | Down | 3       | 21                    | 19.97                 | 0                | 0.602         | 0.334          | 0.762           | YES                                 |
| L311     | LTE B4 | QPSK20M | 20175   | 50  | 0      | Bottom Side   | 1.0                      | Down | 4       | 21                    | 19.97                 | 0.03             | 0.612         | 0.321          | 0.775           | YES                                 |

| Test No. | Band   | Mode    | Channel | RB | offset | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|--------|---------|---------|----|--------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| L312     | LTE B4 | QPSK20M | 20050   | 1  | 50     | Front Face    | 1.0                      | Up   | 1       | 22                    | 21.64                 | -0.02            | 0.266         | 0.145          | 0.289           | YES                                 |
| L313     | LTE B4 | QPSK20M | 20050   | 1  | 50     | Rear Face     | 1.0                      | Up   | 1       | 22                    | 21.64                 | 0.13             | 0.383         | 0.215          | 0.416           | YES                                 |
| L314     | LTE B4 | QPSK20M | 20050   | 1  | 50     | Left Side     | 1.0                      | Up   | 1       | 22                    | 21.64                 | 0.08             | 0.110         | 0.059          | 0.120           | YES                                 |
| L315     | LTE B4 | QPSK20M | 20050   | 1  | 50     | Top Side      | 1.0                      | Up   | 1       | 22                    | 21.64                 | 0                | 0.466         | 0.250          | 0.507           | YES                                 |
| L316     | LTE B4 | QPSK20M | 20175   | 50 | 25     | Front Face    | 1.0                      | Up   | 1       | 22                    | 20.33                 | -0.05            | 0.296         | 0.162          | 0.434           | YES                                 |
| L317     | LTE B4 | QPSK20M | 20175   | 50 | 25     | Rear Face     | 1.0                      | Up   | 1       | 22                    | 20.33                 | 0.06             | 0.467         | 0.256          | 0.685           | YES                                 |
| L318     | LTE B4 | QPSK20M | 20175   | 50 | 25     | Left Side     | 1.0                      | Up   | 1       | 22                    | 20.33                 | 0.17             | 0.115         | 0.064          | 0.169           | YES                                 |
| L319     | LTE B4 | QPSK20M | 20175   | 50 | 25     | Top Side      | 1.0                      | Up   | 1       | 22                    | 20.33                 | 0.02             | 0.496         | 0.265          | 0.728           | YES                                 |
| L320     | LTE B4 | QPSK20M | 20175   | 50 | 25     | Top Side      | 1.0                      | Up   | 2       | 22                    | 20.33                 | -0.14            | 0.528         | 0.256          | 0.775           | YES                                 |
| L321     | LTE B4 | QPSK20M | 20175   | 50 | 25     | Top Side      | 1.0                      | Up   | 3       | 22                    | 20.33                 | 0.02             | <b>0.537</b>  | <b>0.275</b>   | <b>0.788</b>    | YES                                 |
| L322     | LTE B4 | QPSK20M | 20175   | 50 | 25     | Top Side      | 1.0                      | Up   | 4       | 22                    | 20.33                 | 0.09             | 0.504         | 0.239          | 0.740           | YES                                 |
| L332     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Front Face    | 1.0                      | Down | 1       | 24                    | 23.15                 | 0.02             | 0.088         | 0.056          | 0.107           | YES                                 |
| L333     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Rear Face     | 1.0                      | Down | 1       | 24                    | 23.15                 | 0                | 0.171         | 0.101          | 0.208           | YES                                 |
| L334     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Left Side     | 1.0                      | Down | 1       | 24                    | 23.15                 | 0.11             | 0.070         | 0.042          | 0.086           | YES                                 |
| L335     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Right Side    | 1.0                      | Down | 1       | 24                    | 23.15                 | 0.06             | 0.107         | 0.064          | 0.131           | YES                                 |
| L336     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Bottom Side   | 1.0                      | Down | 1       | 24                    | 23.15                 | -0.01            | 0.154         | 0.075          | 0.187           | YES                                 |
| L337     | LTE B5 | QPSK10M | 20525   | 25 | 12     | Front Face    | 1.0                      | Down | 1       | 23                    | 22.08                 | 0.05             | 0.107         | 0.060          | 0.132           | YES                                 |
| L338     | LTE B5 | QPSK10M | 20525   | 25 | 12     | Rear Face     | 1.0                      | Down | 1       | 23                    | 22.08                 | -0.09            | 0.173         | 0.103          | 0.214           | YES                                 |
| L339     | LTE B5 | QPSK10M | 20525   | 25 | 12     | Left Side     | 1.0                      | Down | 1       | 23                    | 22.08                 | 0.03             | 0.056         | 0.033          | 0.069           | YES                                 |
| L340     | LTE B5 | QPSK10M | 20525   | 25 | 12     | Right Side    | 1.0                      | Down | 1       | 23                    | 22.08                 | 0.04             | 0.111         | 0.066          | 0.137           | YES                                 |
| L341     | LTE B5 | QPSK10M | 20525   | 25 | 12     | Bottom Side   | 1.0                      | Down | 1       | 23                    | 22.08                 | -0.15            | 0.148         | 0.074          | 0.183           | YES                                 |
| L342     | LTE B5 | QPSK10M | 20525   | 25 | 12     | Rear Face     | 1.0                      | Down | 2       | 23                    | 22.08                 | 0.01             | 0.201         | 0.119          | 0.249           | YES                                 |
| L343     | LTE B5 | QPSK10M | 20525   | 25 | 12     | Rear Face     | 1.0                      | Down | 3       | 23                    | 22.08                 | 0.03             | <b>0.214</b>  | <b>0.126</b>   | <b>0.265</b>    | YES                                 |
| L344     | LTE B5 | QPSK10M | 20525   | 25 | 12     | Rear Face     | 1.0                      | Down | 4       | 23                    | 22.08                 | -0.08            | 0.198         | 0.106          | 0.245           | YES                                 |
| L354     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Front Face    | 1.0                      | Up   | 1       | 24                    | 23.47                 | 0.01             | 0.097         | 0.062          | 0.110           | YES                                 |
| L355     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Rear Face     | 1.0                      | Up   | 1       | 24                    | 23.47                 | -0.05            | 0.155         | 0.097          | 0.175           | YES                                 |
| L356     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Left Side     | 1.0                      | Up   | 1       | 24                    | 23.47                 | 0.06             | 0.076         | 0.050          | 0.086           | YES                                 |
| L357     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Top Side      | 1.0                      | Up   | 1       | 24                    | 23.47                 | 0.02             | 0.121         | 0.069          | 0.137           | YES                                 |
| L358     | LTE B5 | QPSK10M | 20600   | 25 | 0      | Front Face    | 1.0                      | Up   | 1       | 23                    | 22.35                 | -0.09            | 0.090         | 0.055          | 0.105           | YES                                 |
| L359     | LTE B5 | QPSK10M | 20600   | 25 | 0      | Rear Face     | 1.0                      | Up   | 1       | 23                    | 22.35                 | -0.02            | 0.143         | 0.089          | 0.166           | YES                                 |
| L360     | LTE B5 | QPSK10M | 20600   | 25 | 0      | Left Side     | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.11             | 0.071         | 0.046          | 0.083           | YES                                 |
| L361     | LTE B5 | QPSK10M | 20600   | 25 | 0      | Top Side      | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.03             | 0.114         | 0.067          | 0.133           | YES                                 |
| L362     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Rear Face     | 1.0                      | Up   | 2       | 24                    | 23.47                 | 0                | <b>0.268</b>  | <b>0.160</b>   | <b>0.303</b>    | YES                                 |
| L363     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Rear Face     | 1.0                      | Up   | 3       | 24                    | 23.47                 | 0.02             | 0.213         | 0.121          | 0.241           | YES                                 |
| L364     | LTE B5 | QPSK10M | 20525   | 1  | 24     | Rear Face     | 1.0                      | Up   | 4       | 24                    | 23.47                 | 0.07             | 0.209         | 0.104          | 0.236           | YES                                 |

| Test No. | Band    | Mode    | Channel | RB  | offset | Test Position          | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|---------|---------|---------|-----|--------|------------------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| L374     | LTE B7  | QPSK20M | 21350   | 1   | 50     | Front Face             | 1.0                      | Down | 1       | 21.5                  | 21.15                 | 0.02             | 0.227         | 0.126          | 0.246           | YES                                 |
| L375     | LTE B7  | QPSK20M | 21350   | 1   | 50     | Rear Face              | 1.0                      | Down | 1       | 21.5                  | 21.15                 | 0.03             | 0.449         | 0.217          | 0.487           | YES                                 |
| L376     | LTE B7  | QPSK20M | 21350   | 1   | 50     | Left Side              | 1.0                      | Down | 1       | 21.5                  | 21.15                 | 0.07             | 0.085         | 0.047          | 0.093           | YES                                 |
| L377     | LTE B7  | QPSK20M | 21350   | 1   | 50     | Right Side             | 1.0                      | Down | 1       | 21.5                  | 21.15                 | -0.11            | 0.144         | 0.080          | 0.156           | YES                                 |
| L378     | LTE B7  | QPSK20M | 21350   | 1   | 50     | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 21.15                 | 0.16             | 0.621         | 0.288          | 0.674           | YES                                 |
| L379     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Front Face             | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.09             | 0.203         | 0.100          | 0.250           | YES                                 |
| L380     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Rear Face              | 1.0                      | Down | 1       | 21.5                  | 20.59                 | -0.1             | 0.432         | 0.209          | 0.532           | YES                                 |
| L381     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Left Side              | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.06             | 0.053         | 0.029          | 0.066           | YES                                 |
| L382     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Right Side             | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.05             | 0.153         | 0.082          | 0.188           | YES                                 |
| L383     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.06             | 0.692         | 0.322          | 0.852           | YES                                 |
| L674     | LTE B7  | QPSK20M | 21100   | 50  | 25     | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 20.51                 | 0                | 0.656         | 0.305          | 0.824           | YES                                 |
| L675     | LTE B7  | QPSK20M | 21350   | 50  | 25     | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 20.57                 | 0.03             | 0.615         | 0.285          | 0.762           | YES                                 |
| L677     | LTE B7  | QPSK20M | 21350   | 100 | 0      | Bottom Side            | 1.0                      | Down | 1       | 21.5                  | 20.55                 | 0.04             | 0.681         | 0.316          | 0.848           | YES                                 |
| L384     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Bottom Side            | 1.0                      | Down | 2       | 21.5                  | 20.59                 | -0.01            | 0.591         | 0.215          | 0.728           | YES                                 |
| L385     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Bottom Side            | 1.0                      | Down | 3       | 21.5                  | 20.59                 | 0.08             | 0.629         | 0.295          | 0.775           | YES                                 |
| L386     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Bottom Side            | 1.0                      | Down | 4       | 21.5                  | 20.59                 | 0.02             | 0.648         | 0.246          | 0.798           | YES                                 |
| L676     | LTE B7  | QPSK20M | 20850   | 50  | 25     | Bottom Side (Repeated) | 1.0                      | Down | 1       | 21.5                  | 20.59                 | 0.08             | <b>0.695</b>  | <b>0.323</b>   | <b>0.856</b>    | YES                                 |
| L396     | LTE B7  | QPSK20M | 20850   | 1   | 50     | Front Face             | 1.0                      | Up   | 1       | 18                    | 17.92                 | 0.01             | 0.205         | 0.094          | 0.209           | YES                                 |
| L397     | LTE B7  | QPSK20M | 20850   | 1   | 50     | Rear Face              | 1.0                      | Up   | 1       | 18                    | 17.92                 | -0.03            | 0.530         | 0.219          | 0.540           | YES                                 |
| L398     | LTE B7  | QPSK20M | 20850   | 1   | 50     | Left Side              | 1.0                      | Up   | 1       | 18                    | 17.92                 | 0.11             | 0.161         | 0.083          | 0.164           | YES                                 |
| L399     | LTE B7  | QPSK20M | 20850   | 1   | 50     | Top Side               | 1.0                      | Up   | 1       | 18                    | 17.92                 | 0.09             | <b>0.691</b>  | <b>0.281</b>   | <b>0.704</b>    | YES                                 |
| L400     | LTE B7  | QPSK20M | 20850   | 50  | 50     | Front Face             | 1.0                      | Up   | 1       | 18                    | 17.90                 | 0.04             | 0.207         | 0.094          | 0.212           | YES                                 |
| L401     | LTE B7  | QPSK20M | 20850   | 50  | 50     | Rear Face              | 1.0                      | Up   | 1       | 18                    | 17.90                 | 0.01             | 0.554         | 0.217          | 0.567           | YES                                 |
| L402     | LTE B7  | QPSK20M | 20850   | 50  | 50     | Left Side              | 1.0                      | Up   | 1       | 18                    | 17.90                 | 0                | 0.165         | 0.085          | 0.169           | YES                                 |
| L403     | LTE B7  | QPSK20M | 20850   | 50  | 50     | Top Side               | 1.0                      | Up   | 1       | 18                    | 17.90                 | 0.06             | 0.680         | 0.277          | 0.696           | YES                                 |
| L409     | LTE B7  | QPSK20M | 20850   | 1   | 50     | Top Side               | 1.0                      | Up   | 2       | 18                    | 17.92                 | 0.01             | 0.608         | 0.256          | 0.620           | YES                                 |
| L410     | LTE B7  | QPSK20M | 20850   | 1   | 50     | Top Side               | 1.0                      | Up   | 3       | 18                    | 17.92                 | -0.09            | 0.685         | 0.267          | 0.698           | YES                                 |
| L411     | LTE B7  | QPSK20M | 20850   | 1   | 50     | Top Side               | 1.0                      | Up   | 4       | 18                    | 17.92                 | 0.02             | 0.663         | 0.234          | 0.676           | YES                                 |
| L421     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Front Face             | 1.0                      | Down | 1       | 24                    | 22.83                 | 0.11             | 0.156         | 0.138          | 0.204           | YES                                 |
| L422     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Rear Face              | 1.0                      | Down | 1       | 24                    | 22.83                 | -0.01            | <b>0.182</b>  | <b>0.141</b>   | <b>0.238</b>    | YES                                 |
| L423     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Left Side              | 1.0                      | Down | 1       | 24                    | 22.83                 | 0.03             | 0.117         | 0.082          | 0.153           | YES                                 |
| L424     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Right Side             | 1.0                      | Down | 1       | 24                    | 22.83                 | 0.07             | 0.128         | 0.103          | 0.168           | YES                                 |
| L425     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Bottom Side            | 1.0                      | Down | 1       | 24                    | 22.83                 | -0.05            | 0.133         | 0.074          | 0.174           | YES                                 |
| L426     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Front Face             | 1.0                      | Down | 1       | 23                    | 21.92                 | 0.06             | 0.130         | 0.113          | 0.167           | YES                                 |
| L427     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Rear Face              | 1.0                      | Down | 1       | 23                    | 21.92                 | -0.03            | 0.142         | 0.110          | 0.182           | YES                                 |
| L428     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Left Side              | 1.0                      | Down | 1       | 23                    | 21.92                 | -0.09            | 0.098         | 0.068          | 0.125           | YES                                 |
| L429     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Right Side             | 1.0                      | Down | 1       | 23                    | 21.92                 | -0.12            | 0.121         | 0.098          | 0.155           | YES                                 |
| L430     | LTE B12 | QPSK10M | 23060   | 25  | 25     | Bottom Side            | 1.0                      | Down | 1       | 23                    | 21.92                 | 0.05             | 0.092         | 0.056          | 0.118           | YES                                 |
| L431     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Rear Face              | 1.0                      | Down | 2       | 24                    | 22.83                 | 0.16             | 0.168         | 0.127          | 0.220           | YES                                 |
| L432     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Rear Face              | 1.0                      | Down | 3       | 24                    | 22.83                 | -0.07            | 0.180         | 0.139          | 0.236           | YES                                 |
| L433     | LTE B12 | QPSK10M | 23095   | 1   | 24     | Rear Face              | 1.0                      | Down | 4       | 24                    | 22.83                 | 0.04             | 0.171         | 0.129          | 0.224           | YES                                 |

| Test No. | Band    | Mode    | Channel | RB | offset | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|---------|---------|---------|----|--------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| L443     | LTE B12 | QPSK10M | 23095   | 1  | 24     | Front Face    | 1.0                      | Up   | 1       | 24                    | 23.36                 | 0.05             | 0.010         | 0.007          | 0.011           | YES                                 |
| L444     | LTE B12 | QPSK10M | 23095   | 1  | 24     | Rear Face     | 1.0                      | Up   | 1       | 24                    | 23.36                 | 0.02             | 0.013         | 0.008          | 0.015           | YES                                 |
| L445     | LTE B12 | QPSK10M | 23095   | 1  | 24     | Left Side     | 1.0                      | Up   | 1       | 24                    | 23.36                 | 0.06             | 0.020         | 0.013          | 0.023           | YES                                 |
| L446     | LTE B12 | QPSK10M | 23095   | 1  | 24     | Top Side      | 1.0                      | Up   | 1       | 24                    | 23.36                 | 0.04             | 0.012         | 0.074          | 0.013           | YES                                 |
| L447     | LTE B12 | QPSK10M | 23060   | 25 | 25     | Front Face    | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.09             | 0.009         | 0.006          | 0.010           | YES                                 |
| L448     | LTE B12 | QPSK10M | 23060   | 25 | 25     | Rear Face     | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.05             | 0.013         | 0.009          | 0.015           | YES                                 |
| L449     | LTE B12 | QPSK10M | 23060   | 25 | 25     | Left Side     | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.02             | 0.017         | 0.012          | 0.020           | YES                                 |
| L450     | LTE B12 | QPSK10M | 23060   | 25 | 25     | Top Side      | 1.0                      | Up   | 1       | 23                    | 22.35                 | 0.05             | 0.010         | 0.007          | 0.012           | YES                                 |
| L451     | LTE B12 | QPSK10M | 23095   | 1  | 24     | Left Side     | 1.0                      | Up   | 2       | 24                    | 23.36                 | -0.01            | 0.019         | 0.013          | 0.022           | YES                                 |
| L452     | LTE B12 | QPSK10M | 23095   | 1  | 24     | Left Side     | 1.0                      | Up   | 3       | 24                    | 23.36                 | 0.02             | <b>0.021</b>  | <b>0.015</b>   | <b>0.024</b>    | YES                                 |
| L453     | LTE B12 | QPSK10M | 23095   | 1  | 24     | Left Side     | 1.0                      | Up   | 4       | 24                    | 23.36                 | 0.07             | 0.019         | 0.013          | 0.022           | YES                                 |
| L463     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Front Face    | 1.0                      | Down | 1       | 24                    | 22.78                 | 0.13             | 0.161         | 0.105          | 0.213           | YES                                 |
| L464     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Rear Face     | 1.0                      | Down | 1       | 24                    | 22.78                 | -0.09            | 0.198         | 0.154          | 0.262           | YES                                 |
| L465     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Side     | 1.0                      | Down | 1       | 24                    | 22.78                 | 0.08             | 0.131         | 0.082          | 0.173           | YES                                 |
| L466     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Right Side    | 1.0                      | Down | 1       | 24                    | 22.78                 | 0.01             | 0.129         | 0.079          | 0.171           | YES                                 |
| L467     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Bottom Side   | 1.0                      | Down | 1       | 24                    | 22.78                 | -0.06            | 0.120         | 0.052          | 0.159           | YES                                 |
| L468     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Front Face    | 1.0                      | Down | 1       | 23                    | 21.68                 | 0.18             | 0.121         | 0.083          | 0.164           | YES                                 |
| L469     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Rear Face     | 1.0                      | Down | 1       | 23                    | 21.68                 | -0.09            | <b>0.203</b>  | <b>0.134</b>   | <b>0.275</b>    | YES                                 |
| L470     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Left Side     | 1.0                      | Down | 1       | 23                    | 21.68                 | 0.05             | 0.096         | 0.058          | 0.130           | YES                                 |
| L471     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Right Side    | 1.0                      | Down | 1       | 23                    | 21.68                 | 0.09             | 0.103         | 0.062          | 0.140           | YES                                 |
| L472     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Bottom Side   | 1.0                      | Down | 1       | 23                    | 21.68                 | 0.16             | 0.107         | 0.045          | 0.145           | YES                                 |
| L473     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Rear Face     | 1.0                      | Down | 2       | 23                    | 21.68                 | 0.01             | 0.178         | 0.121          | 0.241           | YES                                 |
| L474     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Rear Face     | 1.0                      | Down | 3       | 23                    | 21.68                 | -0.07            | 0.146         | 0.113          | 0.198           | YES                                 |
| L475     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Rear Face     | 1.0                      | Down | 4       | 23                    | 21.68                 | 0.14             | 0.172         | 0.041          | 0.233           | YES                                 |
| L485     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Front Face    | 1.0                      | Up   | 1       | 24                    | 23.75                 | 0.07             | 0.010         | 0.007          | 0.010           | YES                                 |
| L486     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Rear Face     | 1.0                      | Up   | 1       | 24                    | 23.75                 | 0.08             | 0.015         | 0.010          | 0.016           | YES                                 |
| L487     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Side     | 1.0                      | Up   | 1       | 24                    | 23.75                 | 0.02             | 0.020         | 0.013          | 0.021           | YES                                 |
| L488     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Top Side      | 1.0                      | Up   | 1       | 24                    | 23.75                 | 0.03             | 0.012         | 0.008          | 0.012           | YES                                 |
| L489     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Front Face    | 1.0                      | Up   | 1       | 23                    | 22.62                 | 0.09             | 0.007         | 0.005          | 0.008           | YES                                 |
| L490     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Rear Face     | 1.0                      | Up   | 1       | 23                    | 22.62                 | 0.03             | 0.012         | 0.008          | 0.013           | YES                                 |
| L491     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Left Side     | 1.0                      | Up   | 1       | 23                    | 22.62                 | 0.01             | 0.015         | 0.011          | 0.016           | YES                                 |
| L492     | LTE B17 | QPSK10M | 23780   | 25 | 12     | Top Side      | 1.0                      | Up   | 1       | 23                    | 22.62                 | 0.07             | 0.009         | 0.006          | 0.010           | YES                                 |
| L493     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Side     | 1.0                      | Up   | 2       | 24                    | 23.75                 | 0.15             | <b>0.023</b>  | <b>0.016</b>   | <b>0.024</b>    | YES                                 |
| L494     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Side     | 1.0                      | Up   | 3       | 24                    | 23.75                 | -0.13            | 0.020         | 0.014          | 0.021           | YES                                 |
| L495     | LTE B17 | QPSK10M | 23790   | 1  | 24     | Left Side     | 1.0                      | Up   | 4       | 24                    | 23.75                 | 0.09             | 0.021         | 0.015          | 0.022           | YES                                 |

| Test No. | Band    | Mode    | Channel | RB | offset | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|---------|---------|---------|----|--------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| L505     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Front Face    | 1.0                      | Down | 1       | 24                    | 23.06                 | 0.03             | 0.135         | 0.082          | 0.168           | YES                                 |
| L506     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Rear Face     | 1.0                      | Down | 1       | 24                    | 23.06                 | -0.02            | 0.221         | 0.131          | 0.275           | YES                                 |
| L507     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Left Side     | 1.0                      | Down | 1       | 24                    | 23.06                 | -0.11            | 0.058         | 0.037          | 0.071           | YES                                 |
| L508     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Right Side    | 1.0                      | Down | 1       | 24                    | 23.06                 | 0.09             | 0.134         | 0.089          | 0.167           | YES                                 |
| L509     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Bottom Side   | 1.0                      | Down | 1       | 24                    | 23.06                 | 0                | 0.192         | 0.101          | 0.239           | YES                                 |
| L510     | LTE B26 | QPSK15M | 26865   | 36 | 19     | Front Face    | 1.0                      | Down | 1       | 23                    | 21.94                 | 0.12             | 0.097         | 0.060          | 0.124           | YES                                 |
| L511     | LTE B26 | QPSK15M | 26865   | 36 | 19     | Rear Face     | 1.0                      | Down | 1       | 23                    | 21.94                 | 0.06             | 0.172         | 0.101          | 0.220           | YES                                 |
| L512     | LTE B26 | QPSK15M | 26865   | 36 | 19     | Left Side     | 1.0                      | Down | 1       | 23                    | 21.94                 | -0.07            | 0.063         | 0.042          | 0.080           | YES                                 |
| L513     | LTE B26 | QPSK15M | 26865   | 36 | 19     | Right Side    | 1.0                      | Down | 1       | 23                    | 21.94                 | 0.02             | 0.094         | 0.062          | 0.120           | YES                                 |
| L514     | LTE B26 | QPSK15M | 26865   | 36 | 19     | Bottom Side   | 1.0                      | Down | 1       | 23                    | 21.94                 | 0.08             | 0.142         | 0.078          | 0.181           | YES                                 |
| L515     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Rear Face     | 1.0                      | Down | 2       | 24                    | 23.06                 | -0.09            | 0.214         | 0.123          | 0.266           | YES                                 |
| L516     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Rear Face     | 1.0                      | Down | 3       | 24                    | 23.06                 | 0.01             | <b>0.224</b>  | <b>0.133</b>   | <b>0.278</b>    | YES                                 |
| L517     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Rear Face     | 1.0                      | Down | 4       | 24                    | 23.06                 | 0.16             | 0.209         | 0.109          | 0.260           | YES                                 |
| L527     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Front Face    | 1.0                      | Up   | 1       | 24                    | 23.44                 | 0.01             | 0.090         | 0.056          | 0.102           | YES                                 |
| L528     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Rear Face     | 1.0                      | Up   | 1       | 24                    | 23.44                 | 0                | 0.133         | 0.084          | 0.151           | YES                                 |
| L529     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Left Side     | 1.0                      | Up   | 1       | 24                    | 23.44                 | -0.05            | 0.081         | 0.052          | 0.093           | YES                                 |
| L530     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Top Side      | 1.0                      | Up   | 1       | 24                    | 23.44                 | 0.01             | 0.105         | 0.066          | 0.120           | YES                                 |
| L531     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Front Face    | 1.0                      | Up   | 1       | 23                    | 22.37                 | 0.11             | 0.077         | 0.049          | 0.089           | YES                                 |
| L532     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Rear Face     | 1.0                      | Up   | 1       | 23                    | 22.37                 | -0.09            | 0.122         | 0.075          | 0.141           | YES                                 |
| L533     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Left Side     | 1.0                      | Up   | 1       | 23                    | 22.37                 | 0.04             | 0.065         | 0.043          | 0.076           | YES                                 |
| L534     | LTE B26 | QPSK15M | 26965   | 36 | 0      | Top Side      | 1.0                      | Up   | 1       | 23                    | 22.37                 | 0.02             | 0.112         | 0.065          | 0.130           | YES                                 |
| L535     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Rear Face     | 1.0                      | Up   | 2       | 24                    | 23.44                 | 0.06             | 0.156         | 0.098          | 0.178           | YES                                 |
| L536     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Rear Face     | 1.0                      | Up   | 3       | 24                    | 23.44                 | -0.03            | <b>0.168</b>  | <b>0.106</b>   | <b>0.191</b>    | YES                                 |
| L537     | LTE B26 | QPSK15M | 26865   | 1  | 37     | Rear Face     | 1.0                      | Up   | 4       | 24                    | 23.44                 | -0.08            | 0.164         | 0.101          | 0.187           | YES                                 |
| L547     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Front Face    | 1.0                      | Down | 1       | 22.5                  | 21.88                 | 0.02             | 0.187         | 0.098          | 0.216           | YES                                 |
| L548     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Rear Face     | 1.0                      | Down | 1       | 22.5                  | 21.88                 | -0.06            | 0.313         | 0.150          | 0.361           | YES                                 |
| L549     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Side     | 1.0                      | Down | 1       | 22.5                  | 21.88                 | -0.01            | 0.065         | 0.035          | 0.075           | YES                                 |
| L550     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Right Side    | 1.0                      | Down | 1       | 22.5                  | 21.88                 | 0.08             | 0.138         | 0.072          | 0.159           | YES                                 |
| L551     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Bottom Side   | 1.0                      | Down | 1       | 22.5                  | 21.88                 | 0.01             | 0.476         | 0.223          | 0.550           | YES                                 |
| L552     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Front Face    | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.07             | 0.149         | 0.077          | 0.186           | YES                                 |
| L553     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Rear Face     | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.12             | 0.263         | 0.133          | 0.329           | YES                                 |
| L554     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Left Side     | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.03             | 0.094         | 0.050          | 0.117           | YES                                 |
| L555     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Right Side    | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.04             | 0.134         | 0.068          | 0.167           | YES                                 |
| L556     | LTE B38 | QPSK20M | 37850   | 50 | 25     | Bottom Side   | 1.0                      | Down | 1       | 22.5                  | 21.53                 | 0.02             | 0.457         | 0.214          | 0.571           | YES                                 |
| L557     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Bottom Side   | 1.0                      | Down | 2       | 22.5                  | 21.88                 | -0.02            | <b>0.539</b>  | <b>0.244</b>   | <b>0.622</b>    | YES                                 |
| L558     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Bottom Side   | 1.0                      | Down | 3       | 22.5                  | 21.88                 | 0.11             | 0.513         | 0.201          | 0.592           | YES                                 |
| L559     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Bottom Side   | 1.0                      | Down | 4       | 22.5                  | 21.88                 | -0.08            | 0.534         | 0.231          | 0.617           | YES                                 |

| Test No. | Band    | Mode    | Channel | RB | offset | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|---------|---------|---------|----|--------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| L569     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Front Face    | 1.0                      | Up   | 1       | 20                    | 19.89                 | 0.03             | 0.166         | 0.087          | 0.170           | YES                                 |
| L570     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Rear Face     | 1.0                      | Up   | 1       | 20                    | 19.89                 | 0.01             | 0.459         | 0.189          | 0.471           | YES                                 |
| L571     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Left Side     | 1.0                      | Up   | 1       | 20                    | 19.89                 | -0.14            | 0.163         | 0.083          | 0.167           | YES                                 |
| L572     | LTE B38 | QPSK20M | 38000   | 1  | 50     | Top Side      | 1.0                      | Up   | 1       | 20                    | 19.89                 | 0.06             | 0.546         | 0.220          | 0.560           | YES                                 |
| L573     | LTE B38 | QPSK20M | 37850   | 50 | 0      | Front Face    | 1.0                      | Up   | 1       | 20                    | 19.43                 | 0                | 0.182         | 0.086          | 0.208           | YES                                 |
| L574     | LTE B38 | QPSK20M | 37850   | 50 | 0      | Rear Face     | 1.0                      | Up   | 1       | 20                    | 19.43                 | 0.02             | 0.426         | 0.191          | 0.486           | YES                                 |
| L575     | LTE B38 | QPSK20M | 37850   | 50 | 0      | Left Side     | 1.0                      | Up   | 1       | 20                    | 19.43                 | 0.17             | 0.160         | 0.080          | 0.183           | YES                                 |
| L576     | LTE B38 | QPSK20M | 37850   | 50 | 0      | Top Side      | 1.0                      | Up   | 1       | 20                    | 19.43                 | 0                | 0.603         | 0.244          | 0.688           | YES                                 |
| L577     | LTE B38 | QPSK20M | 37850   | 50 | 0      | Top Side      | 1.0                      | Up   | 2       | 20                    | 19.43                 | 0.01             | 0.612         | 0.250          | 0.699           | YES                                 |
| L578     | LTE B38 | QPSK20M | 37850   | 50 | 0      | Top Side      | 1.0                      | Up   | 3       | 20                    | 19.43                 | 0.12             | <b>0.617</b>  | <b>0.252</b>   | <b>0.704</b>    | YES                                 |
| L579     | LTE B38 | QPSK20M | 37850   | 50 | 0      | Top Side      | 1.0                      | Up   | 4       | 20                    | 19.43                 | 0.18             | 0.608         | 0.248          | 0.694           | YES                                 |
| L589     | LTE B41 | QPSK20M | 41140   | 1  | 50     | Front Face    | 1.0                      | Down | 1       | 22.5                  | 21.90                 | 0.03             | 0.226         | 0.123          | 0.260           | YES                                 |
| L590     | LTE B41 | QPSK20M | 41140   | 1  | 50     | Rear Face     | 1.0                      | Down | 1       | 22.5                  | 21.90                 | -0.11            | 0.297         | 0.152          | 0.341           | YES                                 |
| L591     | LTE B41 | QPSK20M | 41140   | 1  | 50     | Left Side     | 1.0                      | Down | 1       | 22.5                  | 21.90                 | 0.02             | 0.145         | 0.076          | 0.167           | YES                                 |
| L592     | LTE B41 | QPSK20M | 41140   | 1  | 50     | Right Side    | 1.0                      | Down | 1       | 22.5                  | 21.90                 | 0.01             | 0.095         | 0.052          | 0.109           | YES                                 |
| L593     | LTE B41 | QPSK20M | 41140   | 1  | 50     | Bottom Side   | 1.0                      | Down | 1       | 22.5                  | 21.90                 | -0.04            | <b>0.489</b>  | <b>0.227</b>   | <b>0.562</b>    | YES                                 |
| L594     | LTE B41 | QPSK20M | 41140   | 50 | 25     | Front Face    | 1.0                      | Down | 1       | 22.5                  | 21.72                 | 0                | 0.209         | 0.116          | 0.250           | YES                                 |
| L595     | LTE B41 | QPSK20M | 41140   | 50 | 25     | Rear Face     | 1.0                      | Down | 1       | 22.5                  | 21.72                 | 0.15             | 0.296         | 0.144          | 0.355           | YES                                 |
| L596     | LTE B41 | QPSK20M | 41140   | 50 | 25     | Left Side     | 1.0                      | Down | 1       | 22.5                  | 21.72                 | 0.02             | 0.104         | 0.056          | 0.125           | YES                                 |
| L597     | LTE B41 | QPSK20M | 41140   | 50 | 25     | Right Side    | 1.0                      | Down | 1       | 22.5                  | 21.72                 | -0.09            | 0.087         | 0.045          | 0.104           | YES                                 |
| L598     | LTE B41 | QPSK20M | 41140   | 50 | 25     | Bottom Side   | 1.0                      | Down | 1       | 22.5                  | 21.72                 | -0.01            | 0.465         | 0.214          | 0.557           | YES                                 |
| L599     | LTE B41 | QPSK20M | 41140   | 1  | 50     | Bottom Side   | 1.0                      | Down | 2       | 22.5                  | 21.90                 | 0.17             | 0.481         | 0.218          | 0.553           | YES                                 |
| L600     | LTE B41 | QPSK20M | 41140   | 1  | 50     | Bottom Side   | 1.0                      | Down | 3       | 22.5                  | 21.90                 | 0.12             | 0.471         | 0.219          | 0.541           | YES                                 |
| L601     | LTE B41 | QPSK20M | 41140   | 1  | 50     | Bottom Side   | 1.0                      | Down | 4       | 22.5                  | 21.90                 | 0                | 0.467         | 0.217          | 0.536           | YES                                 |
| L611     | LTE B41 | QPSK20M | 40440   | 1  | 50     | Front Face    | 1.0                      | Up   | 1       | 20                    | 19.75                 | 0.03             | 0.093         | 0.088          | 0.099           | YES                                 |
| L612     | LTE B41 | QPSK20M | 40440   | 1  | 50     | Rear Face     | 1.0                      | Up   | 1       | 20                    | 19.75                 | 0.11             | 0.440         | 0.197          | 0.466           | YES                                 |
| L613     | LTE B41 | QPSK20M | 40440   | 1  | 50     | Left Side     | 1.0                      | Up   | 1       | 20                    | 19.75                 | -0.01            | 0.147         | 0.079          | 0.156           | YES                                 |
| L614     | LTE B41 | QPSK20M | 40440   | 1  | 50     | Top Side      | 1.0                      | Up   | 1       | 20                    | 19.75                 | 0.03             | 0.625         | 0.254          | 0.661           | YES                                 |
| L615     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Front Face    | 1.0                      | Up   | 1       | 20                    | 19.41                 | -0.09            | 0.167         | 0.082          | 0.191           | YES                                 |
| L616     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Rear Face     | 1.0                      | Up   | 1       | 20                    | 19.41                 | 0.04             | 0.469         | 0.196          | 0.537           | YES                                 |
| L617     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Left Side     | 1.0                      | Up   | 1       | 20                    | 19.41                 | -0.02            | 0.145         | 0.076          | 0.166           | YES                                 |
| L618     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Top Side      | 1.0                      | Up   | 1       | 20                    | 19.41                 | 0.05             | 0.606         | 0.244          | 0.694           | YES                                 |
| L619     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Top Side      | 1.0                      | Up   | 2       | 20                    | 19.41                 | 0.17             | 0.641         | 0.257          | 0.734           | YES                                 |
| L620     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Top Side      | 1.0                      | Up   | 3       | 20                    | 19.41                 | 0.05             | 0.628         | 0.231          | 0.719           | YES                                 |
| L621     | LTE B41 | QPSK20M | 40440   | 50 | 50     | Top Side      | 1.0                      | Up   | 4       | 20                    | 19.41                 | 0.09             | <b>0.649</b>  | <b>0.264</b>   | <b>0.743</b>    | YES                                 |

| Test No. | Band    | Mode    | Channel | RB | offset | Test Position | Separation Distance (cm) | Ant  | Battery | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|---------|---------|---------|----|--------|---------------|--------------------------|------|---------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| L631     | LTE B66 | QPSK20M | 132072  | 1  | 50     | Front Face    | 1.0                      | Down | 1       | 21                    | 20.81                 | 0.08             | 0.130         | 0.085          | 0.136           | YES                                 |
| L632     | LTE B66 | QPSK20M | 132072  | 1  | 50     | Rear Face     | 1.0                      | Down | 1       | 21                    | 20.81                 | -0.01            | 0.411         | 0.239          | 0.429           | YES                                 |
| L633     | LTE B66 | QPSK20M | 132072  | 1  | 50     | Left Side     | 1.0                      | Down | 1       | 21                    | 20.81                 | 0.07             | 0.080         | 0.049          | 0.084           | YES                                 |
| L634     | LTE B66 | QPSK20M | 132072  | 1  | 50     | Right Side    | 1.0                      | Down | 1       | 21                    | 20.81                 | 0.03             | 0.062         | 0.038          | 0.065           | YES                                 |
| L635     | LTE B66 | QPSK20M | 132072  | 1  | 50     | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.81                 | 0.02             | 0.542         | 0.305          | 0.566           | YES                                 |
| L636     | LTE B66 | QPSK20M | 132272  | 50 | 0      | Front Face    | 1.0                      | Down | 1       | 21                    | 20.51                 | -0.04            | 0.146         | 0.092          | 0.164           | YES                                 |
| L637     | LTE B66 | QPSK20M | 132272  | 50 | 0      | Rear Face     | 1.0                      | Down | 1       | 21                    | 20.51                 | 0.11             | 0.427         | 0.245          | 0.478           | YES                                 |
| L638     | LTE B66 | QPSK20M | 132272  | 50 | 0      | Left Side     | 1.0                      | Down | 1       | 21                    | 20.51                 | 0.01             | 0.071         | 0.040          | 0.079           | YES                                 |
| L639     | LTE B66 | QPSK20M | 132272  | 50 | 0      | Right Side    | 1.0                      | Down | 1       | 21                    | 20.51                 | 0.15             | 0.043         | 0.026          | 0.048           | YES                                 |
| L640     | LTE B66 | QPSK20M | 132272  | 50 | 0      | Bottom Side   | 1.0                      | Down | 1       | 21                    | 20.51                 | 0                | <b>0.571</b>  | <b>0.319</b>   | <b>0.640</b>    | YES                                 |
| L651     | LTE B66 | QPSK20M | 132272  | 50 | 0      | Bottom Side   | 1.0                      | Down | 2       | 21                    | 20.51                 | 0.06             | 0.562         | 0.306          | 0.630           | YES                                 |
| L652     | LTE B66 | QPSK20M | 132272  | 50 | 0      | Bottom Side   | 1.0                      | Down | 3       | 21                    | 20.51                 | -0.09            | 0.549         | 0.301          | 0.615           | YES                                 |
| L653     | LTE B66 | QPSK20M | 132272  | 50 | 0      | Bottom Side   | 1.0                      | Down | 4       | 21                    | 20.51                 | -0.04            | 0.534         | 0.298          | 0.598           | YES                                 |
| L663     | LTE B66 | QPSK20M | 132272  | 1  | 50     | Front Face    | 1.0                      | Up   | 1       | 21                    | 20.88                 | 0.02             | 0.290         | 0.159          | 0.298           | YES                                 |
| L664     | LTE B66 | QPSK20M | 132272  | 1  | 50     | Rear Face     | 1.0                      | Up   | 1       | 21                    | 20.88                 | 0.06             | 0.463         | 0.254          | 0.475           | YES                                 |
| L665     | LTE B66 | QPSK20M | 132272  | 1  | 50     | Left Side     | 1.0                      | Up   | 1       | 21                    | 20.88                 | -0.02            | 0.162         | 0.093          | 0.166           | YES                                 |
| L666     | LTE B66 | QPSK20M | 132272  | 1  | 50     | Top Side      | 1.0                      | Up   | 1       | 21                    | 20.88                 | -0.03            | 0.457         | 0.242          | 0.469           | YES                                 |
| L667     | LTE B66 | QPSK20M | 132272  | 50 | 25     | Front Face    | 1.0                      | Up   | 1       | 21                    | 20.81                 | 0.12             | 0.278         | 0.157          | 0.290           | YES                                 |
| L668     | LTE B66 | QPSK20M | 132272  | 50 | 25     | Rear Face     | 1.0                      | Up   | 1       | 21                    | 20.81                 | 0.08             | 0.452         | 0.249          | 0.472           | YES                                 |
| L669     | LTE B66 | QPSK20M | 132272  | 50 | 25     | Left Side     | 1.0                      | Up   | 1       | 21                    | 20.81                 | 0.17             | 0.116         | 0.067          | 0.121           | YES                                 |
| L670     | LTE B66 | QPSK20M | 132272  | 50 | 25     | Top Side      | 1.0                      | Up   | 1       | 21                    | 20.81                 | -0.02            | <b>0.465</b>  | <b>0.246</b>   | <b>0.486</b>    | YES                                 |
| L671     | LTE B66 | QPSK20M | 132272  | 50 | 25     | Top Side      | 1.0                      | Up   | 2       | 21                    | 20.81                 | 0.06             | 0.453         | 0.234          | 0.473           | YES                                 |
| L672     | LTE B66 | QPSK20M | 132272  | 50 | 25     | Top Side      | 1.0                      | Up   | 3       | 21                    | 20.81                 | 0.19             | 0.448         | 0.229          | 0.468           | YES                                 |
| L673     | LTE B66 | QPSK20M | 132272  | 50 | 25     | Top Side      | 1.0                      | Up   | 4       | 21                    | 20.81                 | -0.04            | 0.463         | 0.245          | 0.483           | YES                                 |

| Test No. | Band    | Channel | Test Position | Separation Distance (cm) | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR | product specific 10-g SAR Exclusion |
|----------|---------|---------|---------------|--------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|-------------------------------------|
| W38      | 802.11b | 6       | Front Face    | 1                        | 1       | 1         | 18                    | 16.77                 | 0.06             | 0.137         | 0.074          | 0.182           | YES                                 |
| W39      | 802.11b | 6       | Rear Face     | 1                        | 1       | 1         | 18                    | 16.77                 | 0.02             | <b>0.210</b>  | <b>0.102</b>   | <b>0.279</b>    | YES                                 |
| W40      | 802.11b | 6       | Right Side    | 1                        | 1       | 1         | 18                    | 16.77                 | -0.01            | 0.143         | 0.073          | 0.190           | YES                                 |
| W41      | 802.11b | 6       | Top Side      | 1                        | 1       | 1         | 18                    | 16.77                 | 0.07             | 0.122         | 0.062          | 0.162           | YES                                 |
| W42      | 802.11b | 6       | Rear Face     | 1                        | 2       | 1         | 18                    | 16.77                 | 0.11             | 0.178         | 0.092          | 0.236           | YES                                 |
| W43      | 802.11b | 6       | Rear Face     | 1                        | 3       | 1         | 18                    | 16.77                 | 0.04             | 0.153         | 0.072          | 0.203           | YES                                 |
| W44      | 802.11b | 6       | Rear Face     | 1                        | 4       | 1         | 18                    | 16.77                 | -0.18            | 0.167         | 0.087          | 0.222           | YES                                 |
| W87      | 802.11a | 48      | Front Face    | 1                        | 1       | 6         | 13                    | 11.68                 | 0.01             | 0.106         | 0.021          | 0.144           | YES                                 |
| W88      | 802.11a | 48      | Rear Face     | 1                        | 1       | 6         | 13                    | 11.68                 | 0.13             | 0.119         | 0.038          | 0.161           | YES                                 |
| W89      | 802.11a | 48      | Right Side    | 1                        | 1       | 6         | 13                    | 11.68                 | -0.02            | <0.001        | <0.001         | <0.001          | YES                                 |
| W90      | 802.11a | 48      | Top Side      | 1                        | 1       | 6         | 13                    | 11.68                 | 0.15             | <b>0.267</b>  | <b>0.079</b>   | <b>0.362</b>    | YES                                 |
| W91      | 802.11a | 48      | Top Side      | 1                        | 2       | 6         | 13                    | 11.68                 | -0.01            | 0.245         | 0.074          | 0.332           | YES                                 |
| W92      | 802.11a | 48      | Top Side      | 1                        | 3       | 6         | 13                    | 11.68                 | 0.06             | 0.261         | 0.078          | 0.354           | YES                                 |
| W93      | 802.11a | 48      | Top Side      | 1                        | 4       | 6         | 13                    | 11.68                 | 0.04             | 0.259         | 0.077          | 0.351           | YES                                 |
| W80      | 802.11a | 149     | Front Face    | 1                        | 1       | 6         | 11                    | 9.89                  | 0.03             | 0.100         | 0.034          | 0.129           | YES                                 |
| W81      | 802.11a | 149     | Rear Face     | 1                        | 1       | 6         | 11                    | 9.89                  | 0.01             | 0.111         | 0.036          | 0.143           | YES                                 |
| W82      | 802.11a | 149     | Right Side    | 1                        | 1       | 6         | 11                    | 9.89                  | -0.04            | 0.028         | 0.010          | 0.036           | YES                                 |
| W83      | 802.11a | 149     | Top Side      | 1                        | 1       | 6         | 11                    | 9.89                  | -0.08            | <b>0.348</b>  | <b>0.095</b>   | <b>0.449</b>    | YES                                 |
| W84      | 802.11a | 149     | Top Side      | 1                        | 2       | 6         | 11                    | 9.89                  | 0.06             | 0.321         | 0.086          | 0.414           | YES                                 |
| W85      | 802.11a | 149     | Top Side      | 1                        | 3       | 6         | 11                    | 9.89                  | -0.18            | 0.293         | 0.081          | 0.378           | YES                                 |
| W86      | 802.11a | 149     | Top Side      | 1                        | 4       | 6         | 11                    | 9.89                  | 0.07             | 0.312         | 0.070          | 0.403           | YES                                 |

## Product specific 10-g SAR test results

| Test No. | Band   | Channel | Test Position | Separation Distance (cm) | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|--------|---------|---------------|--------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W103     | BT DH5 | 0       | Front Face    | 0                        | 1       | 1         | 11                    | 10.09                 | -0.03            | 0.367         | 0.151          | 0.453           |
| W104     | BT DH5 | 0       | Rear Face     | 0                        | 1       | 1         | 11                    | 10.09                 | 0.07             | <b>0.438</b>  | <b>0.180</b>   | <b>0.540</b>    |
| W105     | BT DH5 | 0       | Right Side    | 0                        | 1       | 1         | 11                    | 10.09                 | 0.09             | 0.212         | 0.090          | 0.261           |
| W106     | BT DH5 | 0       | Top Side      | 0                        | 1       | 1         | 11                    | 10.09                 | 0                | 0.358         | 0.142          | 0.441           |
| W107     | BT DH5 | 0       | Rear Face     | 0                        | 2       | 1         | 11                    | 10.09                 | 0.02             | 0.393         | 0.173          | 0.485           |
| W108     | BT DH5 | 0       | Rear Face     | 0                        | 3       | 1         | 11                    | 10.09                 | -0.05            | 0.369         | 0.168          | 0.455           |
| W109     | BT DH5 | 0       | Rear Face     | 0                        | 4       | 1         | 11                    | 10.09                 | 0.01             | 0.379         | 0.170          | 0.467           |

## WiFi only

| Test No. | Band    | Channel | Test Position | Separation Distance (cm) | Battery | Data Rate | Maximum Tune-up (dBm) | Conducted Power (dBm) | Power Drift (dB) | SAR 1g (W/kg) | SAR 10g (W/kg) | Reported 1g SAR |
|----------|---------|---------|---------------|--------------------------|---------|-----------|-----------------------|-----------------------|------------------|---------------|----------------|-----------------|
| W52      | 802.11a | 52      | Front Face    | 0                        | 1       | 6         | 19                    | 18.85                 | 0.17             | 3.740         | 1.170          | 1.211           |
| W53      | 802.11a | 52      | Rear Face     | 0                        | 1       | 6         | 19                    | 18.85                 | 0                | 4.300         | 1.140          | 1.180           |
| W54      | 802.11a | 52      | Right Side    | 0                        | 1       | 6         | 19                    | 18.85                 | 0.12             | 3.610         | 0.763          | 0.790           |
| W55      | 802.11a | 52      | Top Side      | 0                        | 1       | 6         | 19                    | 18.85                 | -0.05            | <b>12.300</b> | <b>2.520</b>   | <b>2.609</b>    |
| W56      | 802.11a | 52      | Top Side      | 0                        | 2       | 6         | 19                    | 18.85                 | 0.06             | 12.060        | 2.120          | 2.195           |
| W57      | 802.11a | 52      | Top Side      | 0                        | 3       | 6         | 19                    | 18.85                 | -0.01            | 12.170        | 2.391          | 2.475           |
| W58      | 802.11a | 52      | Top Side      | 0                        | 4       | 6         | 19                    | 18.85                 | 0.03             | 12.230        | 2.235          | 2.314           |
| W66      | 802.11a | 108     | Front Face    | 0                        | 1       | 6         | 20                    | 18.67                 | 0.03             | 5.030         | 1.760          | 2.391           |
| W67      | 802.11a | 108     | Rear Face     | 0                        | 1       | 6         | 20                    | 18.67                 | 0                | 6.480         | 1.670          | 2.268           |
| W68      | 802.11a | 108     | Right Side    | 0                        | 1       | 6         | 20                    | 18.67                 | -0.12            | 2.010         | 0.634          | 0.861           |
| W69      | 802.11a | 108     | Top Side      | 0                        | 1       | 6         | 20                    | 18.67                 | -0.01            | <b>9.310</b>  | <b>1.940</b>   | <b>2.635</b>    |
| W70      | 802.11a | 108     | Top Side      | 0                        | 2       | 6         | 20                    | 18.67                 | 0.02             | 8.890         | 1.480          | 2.010           |
| W71      | 802.11a | 108     | Top Side      | 0                        | 3       | 6         | 20                    | 18.67                 | 0.04             | 9.120         | 1.836          | 2.494           |
| W72      | 802.11a | 108     | Top Side      | 0                        | 4       | 6         | 20                    | 18.67                 | 0.07             | 9.230         | 1.870          | 2.540           |

Note: The value with boldface is the maximum SAR Value of each test band.

### 7.3 MULTIPLE TRANSMITTER EVALUATION

The following tables list information which is relevant for the decision if a simultaneous transmit evaluation is necessary according to FCC KDB 447498D01 General RF Exposure Guidance v06.

The location of the antenna inside EUT, please refer to Appendix E.

#### 7.3.1 SIMULTANEOUS TRANSMISSION CONDITIONS

Per FCC KDB 447498 D01, SAR compliance for simultaneous transmission must be considered when the maximum duration of overlapping transmissions, including network hand-offs, is greater than 30 seconds. This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis.

The Simultaneous Transmission Possibilities of this device are as below:

| NO. | Simultaneous Tx Combination          | Head | Body-worn<br>(15mm) | Hotspot<br>(10mm) | Product<br>specific<br>10-g<br>(0mm) |
|-----|--------------------------------------|------|---------------------|-------------------|--------------------------------------|
| 1   | GSM/UMTS/LTE(Main Ant) + 2.4G WIFI   | Yes  | Yes                 | Yes               | Yes                                  |
| 2   | GSM/UMTS/LTE(Main Ant) + 5G WIFI     | Yes  | Yes                 | Yes               | Yes                                  |
| 3   | GSM/UMTS/LTE(Main Ant) + BT          | Yes  | Yes                 | No                | Yes                                  |
| 4   | GSM/UMTS/LTE(Second Ant) + 2.4G WIFI | Yes  | Yes                 | Yes               | Yes                                  |
| 5   | GSM/UMTS/LTE(Second Ant) + 5G WIFI   | Yes  | Yes                 | Yes               | Yes                                  |
| 6   | GSM/UMTS/LTE(Second Ant) + BT        | Yes  | Yes                 | No                | Yes                                  |

Note:

- 1) 2G&3G&4G share the same Tx antenna and can't transmit simultaneously.
- 2) WiFi and Bluetooth share the same Tx antenna and can't transmit simultaneously.
- 3) Main Ant and Second Ant can't transmit simultaneously.

### 7.3.2 SAR SUMMATION SCENARIO

#### 1. About BT/WIFI and GSM/UMTS/LTE Down Antenna

| Position                  | Head         |              |              |              | Body-worn          |                   | Hotspot          |                 |                 |                  |                |                   |
|---------------------------|--------------|--------------|--------------|--------------|--------------------|-------------------|------------------|-----------------|-----------------|------------------|----------------|-------------------|
|                           | Right Cheek  | Right Tilted | Left Cheek   | Left Tilted  | Front Face (1.5cm) | Rear Face (1.5cm) | Front Face (1cm) | Rear Face (1cm) | Left Side (1cm) | Right Side (1cm) | Top Side (1cm) | Bottom Side (1cm) |
| <b>GSM 850</b>            | 0.206        | 0.122        | 0.175        | 0.129        | 0.118              | 0.177             | 0.109            | 0.294           | 0.059           | 0.126            | /              | 0.204             |
| <b>GSM 1900</b>           | 0.082        | 0.043        | 0.079        | 0.054        | 0.165              | 0.345             | 0.228            | 0.596           | 0.112           | 0.055            | /              | 0.699             |
| <b>UMTS B2</b>            | 0.172        | 0.109        | 0.154        | 0.141        | 0.135              | 0.286             | 0.207            | 0.542           | 0.097           | 0.030            | /              | 0.629             |
| <b>UMTS B4</b>            | 0.126        | 0.078        | 0.113        | 0.081        | 0.117              | 0.341             | 0.185            | 0.644           | 0.132           | 0.060            | /              | 0.680             |
| <b>UMTS B5</b>            | 0.216        | 0.120        | 0.172        | 0.131        | 0.154              | 0.251             | 0.155            | 0.301           | 0.090           | 0.159            | /              | 0.256             |
| <b>LTE B2</b>             | 0.150        | 0.117        | 0.133        | 0.120        | 0.145              | 0.317             | 0.231            | 0.563           | 0.114           | 0.063            | /              | 0.662             |
| <b>LTE B4</b>             | 0.119        | 0.081        | 0.104        | 0.094        | 0.111              | 0.369             | 0.224            | 0.672           | 0.077           | 0.070            | /              | 0.798             |
| <b>LTE B5</b>             | 0.191        | 0.112        | 0.175        | 0.116        | 0.117              | 0.210             | 0.132            | 0.265           | 0.086           | 0.137            | /              | 0.187             |
| <b>LTE B7</b>             | 0.105        | 0.056        | 0.143        | 0.109        | 0.144              | 0.322             | 0.250            | 0.532           | 0.093           | 0.188            | /              | 0.856             |
| <b>LTE B12</b>            | 0.127        | 0.082        | 0.122        | 0.085        | 0.196              | 0.253             | 0.204            | 0.238           | 0.153           | 0.168            | /              | 0.174             |
| <b>LTE B17</b>            | 0.131        | 0.060        | 0.120        | 0.062        | 0.177              | 0.250             | 0.213            | 0.275           | 0.173           | 0.171            | /              | 0.159             |
| <b>LTE B26</b>            | 0.195        | 0.124        | 0.167        | 0.125        | 0.152              | 0.258             | 0.168            | 0.278           | 0.080           | 0.167            | /              | 0.239             |
| <b>LTE B38</b>            | 0.067        | 0.047        | 0.123        | 0.081        | 0.162              | 0.249             | 0.216            | 0.361           | 0.117           | 0.167            | /              | 0.622             |
| <b>LTE B41</b>            | 0.085        | 0.063        | 0.161        | 0.106        | 0.164              | 0.211             | 0.260            | 0.355           | 0.167           | 0.109            | /              | 0.562             |
| <b>LTE B66</b>            | 0.114        | 0.089        | 0.103        | 0.097        | 0.115              | 0.304             | 0.164            | 0.478           | 0.084           | 0.065            | /              | 0.640             |
| <b>802.11b/g</b>          | 0.122        | 0.221        | 0.434        | 0.356        | 0.155              | 0.175             | 0.182            | 0.279           | /               | 0.190            | 0.162          | /                 |
| <b>5.2G</b>               | /            | /            | /            | /            | /                  | /                 | 0.144            | 0.161           | /               | <0.001           | 0.362          | /                 |
| <b>5.3G</b>               | 0.165        | 0.245        | 0.305        | 0.409        | 0.322              | 0.427             | /                | /               | /               | /                | /              | /                 |
| <b>5.5G</b>               | 0.151        | 0.215        | 0.236        | 0.467        | 0.363              | 0.454             | /                | /               | /               | /                | /              | /                 |
| <b>5.8G</b>               | 0.148        | 0.200        | 0.211        | 0.399        | 0.346              | 0.331             | 0.129            | 0.143           | /               | 0.036            | 0.449          | /                 |
| <b>Bluetooth</b>          | 0.163        | 0.169        | 0.300        | 0.239        | 0.027              | 0.035             | /                | /               | /               | /                | /              | /                 |
| <b>Max. SAR Summation</b> | <b>0.381</b> | <b>0.369</b> | <b>0.609</b> | <b>0.608</b> | <b>0.559</b>       | <b>0.823</b>      | <b>0.442</b>     | <b>0.951</b>    | <b>0.173</b>    | <b>0.378</b>     | <b>0.449</b>   | <b>0.856</b>      |

Note: MAX.  $\sum SAR_{1g} = 0.951W/Kg < 1.6W/Kg$ , so the SAR to peak location separation ratio should not be considered.

## 2. About BT/WIFI and GSM/UMTS/LTE Up Antenna

| Position           | Head        |              |            |             | Body-worn          |                   | Hotspot          |                 |                 |                  |                |                   |
|--------------------|-------------|--------------|------------|-------------|--------------------|-------------------|------------------|-----------------|-----------------|------------------|----------------|-------------------|
|                    | Right Cheek | Right Tilted | Left Cheek | Left Tilted | Front Face (1.5cm) | Rear Face (1.5cm) | Front Face (1cm) | Rear Face (1cm) | Left Side (1cm) | Right Side (1cm) | Top Side (1cm) | Bottom Side (1cm) |
| GSM 850            | 0.479       | 0.272        | 0.306      | 0.228       | 0.076              | 0.113             | 0.158            | 0.283           | 0.103           | /                | 0.222          | /                 |
| GSM 1900           | 0.399       | 0.540        | 0.281      | 0.346       | 0.114              | 0.179             | 0.279            | 0.443           | 0.131           | /                | 0.590          | /                 |
| UMTS B2            | 0.550       | 0.655        | 0.339      | 0.455       | 0.165              | 0.240             | 0.286            | 0.503           | 0.129           | /                | 0.598          | /                 |
| UMTS B4            | 0.623       | 0.769        | 0.426      | 0.461       | 0.130              | 0.171             | 0.254            | 0.358           | 0.104           | /                | 0.535          | /                 |
| UMTS B5            | 0.676       | 0.537        | 0.368      | 0.414       | 0.073              | 0.098             | 0.095            | 0.204           | 0.074           | /                | 0.127          | /                 |
| LTE B2             | 0.551       | 0.683        | 0.382      | 0.452       | 0.173              | 0.225             | 0.301            | 0.428           | 0.124           | /                | 0.551          | /                 |
| LTE B4             | 0.524       | 0.601        | 0.373      | 0.486       | 0.181              | 0.304             | 0.434            | 0.685           | 0.169           | /                | 0.788          | /                 |
| LTE B5             | 0.782       | 0.469        | 0.472      | 0.383       | 0.053              | 0.099             | 0.110            | 0.303           | 0.086           | /                | 0.137          | /                 |
| LTE B7             | 0.887       | 1.029        | 0.348      | 0.417       | 0.090              | 0.204             | 0.212            | 0.567           | 0.169           | /                | 0.704          | /                 |
| LTE B12            | 0.062       | 0.058        | 0.038      | 0.032       | 0.013              | 0.015             | 0.011            | 0.015           | 0.024           | /                | 0.013          | /                 |
| LTE B17            | 0.075       | 0.057        | 0.051      | 0.049       | 0.012              | 0.016             | 0.010            | 0.016           | 0.021           | /                | 0.024          | /                 |
| LTE B26            | 0.647       | 0.348        | 0.368      | 0.407       | 0.053              | 0.073             | 0.102            | 0.191           | 0.093           | /                | 0.130          | /                 |
| LTE B38            | 0.562       | 0.798        | 0.234      | 0.312       | 0.123              | 0.293             | 0.208            | 0.486           | 0.183           | /                | 0.704          | /                 |
| LTE B41            | 0.607       | 0.728        | 0.241      | 0.284       | 0.135              | 0.283             | 0.191            | 0.537           | 0.166           | /                | 0.743          | /                 |
| LTE B66            | 0.916       | 0.947        | 0.665      | 0.798       | 0.131              | 0.179             | 0.298            | 0.475           | 0.166           | /                | 0.486          | /                 |
| 802.11b/g          | 0.122       | 0.221        | 0.434      | 0.356       | 0.155              | 0.175             | 0.182            | 0.279           | /               | 0.190            | 0.162          | /                 |
| 5.2G               | /           | /            | /          | /           | /                  | /                 | 0.144            | 0.161           | /               | <0.001           | 0.362          | /                 |
| 5.3G               | 0.165       | 0.245        | 0.305      | 0.409       | 0.322              | 0.427             | /                | /               | /               | /                | /              | /                 |
| 5.5G               | 0.151       | 0.215        | 0.236      | 0.467       | 0.363              | 0.454             | /                | /               | /               | /                | /              | /                 |
| 5.8G               | 0.148       | 0.200        | 0.211      | 0.399       | 0.346              | 0.331             | 0.129            | 0.143           | /               | 0.036            | 0.449          | /                 |
| Bluetooth          | 0.163       | 0.169        | 0.300      | 0.239       | 0.027              | 0.035             | /                | /               | /               | /                | /              | /                 |
| Max. SAR Summation | 1.081       | 1.274        | 1.099      | 1.265       | 0.544              | 0.758             | 0.616            | 0.964           | 0.183           | 0.190            | 1.237          | 0.000             |

Note: MAX.  $\sum SAR_{1g} = 1.274W/Kg < 1.6W/Kg$ , so the SAR to peak location separation ratio should not be considered.

### 3. About product specific 10g SAR

| Position           | Specific 10g SAR    |                    |                    |                     |                   |                      |
|--------------------|---------------------|--------------------|--------------------|---------------------|-------------------|----------------------|
|                    | Front Face<br>(0cm) | Rear Face<br>(0cm) | Left Side<br>(0cm) | Right Side<br>(0cm) | Top Side<br>(0cm) | Bottom Side<br>(0cm) |
| GSM 850            | /                   | /                  | /                  | /                   | /                 | /                    |
| GSM 1900           | /                   | /                  | /                  | /                   | /                 | /                    |
| UMTS B2            | /                   | /                  | /                  | /                   | /                 | /                    |
| UMTS B4            | /                   | /                  | /                  | /                   | /                 | /                    |
| UMTS B5            | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B2             | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B4             | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B5             | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B7             | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B12            | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B26            | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B38            | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B41            | /                   | /                  | /                  | /                   | /                 | /                    |
| LTE B66            | /                   | /                  | /                  | /                   | /                 | /                    |
| WiFi 2.4G          | /                   | /                  | /                  | /                   | /                 | /                    |
| WiFi 5.2G          | /                   | /                  | /                  | /                   | /                 | /                    |
| WiFi 5.3G          | 1.211               | 1.180              | /                  | 0.790               | 2.609             | /                    |
| WiFi 5.6G          | 2.391               | 2.268              | /                  | 0.861               | 2.635             | /                    |
| WiFi 5.8G          | /                   | /                  | /                  | /                   | /                 | /                    |
| BT                 | 0.453               | 0.540              | /                  | 0.261               | 0.441             | /                    |
| Max. SAR Summation | 2.391               | 2.268              | 0.000              | 0.861               | 2.635             | 0.000                |

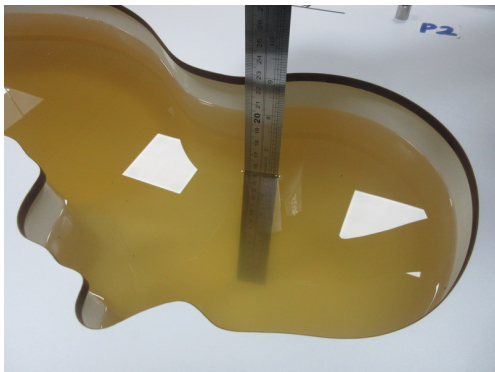
**Note:**

The Simultaneous SAR of product Specific 10-g SAR is 2.635W/Kg which less than 4.0W/Kg, so the Simultaneous SAR is not required to calculate.

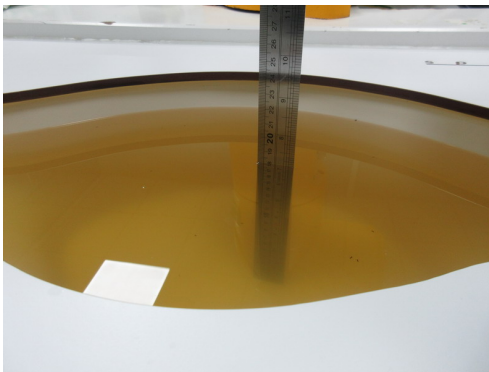
**APPENDIX****1. TEST LAYOUT****Specific Absorption Rate Test Layout**

**Liquid depth in the flat Phantom ( $\geq 15\text{cm}$  depth)**

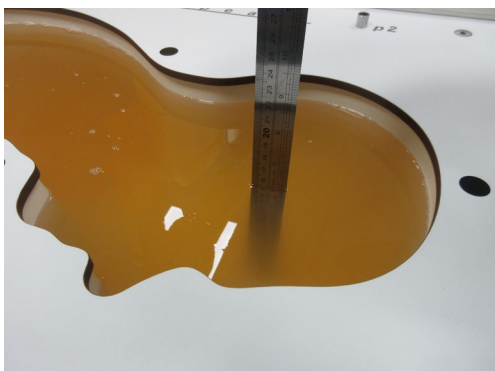
HSL750\_Head\_15.5cm



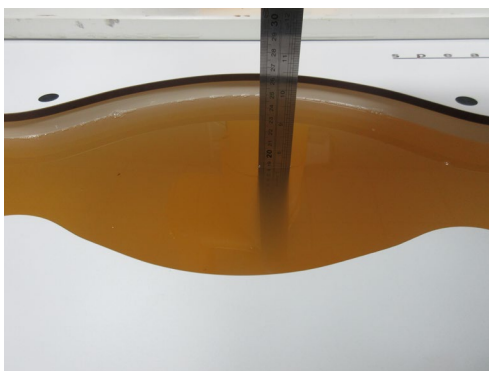
HSL750\_Body\_18.1cm



HSL810-920\_Head\_15.6cm



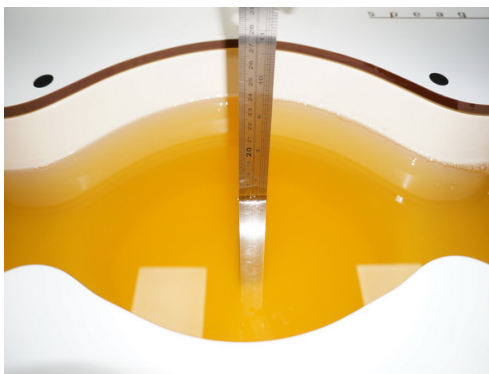
HSL810-920\_Body\_18.8cm



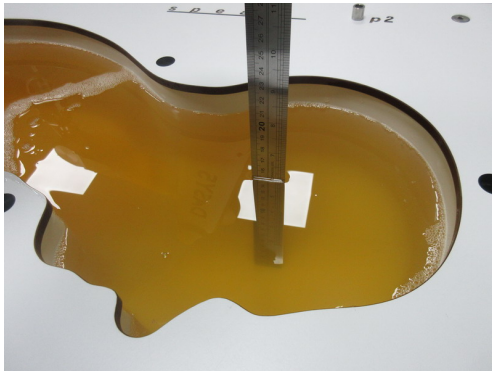
HSL1700-1900\_Head\_15.5cm



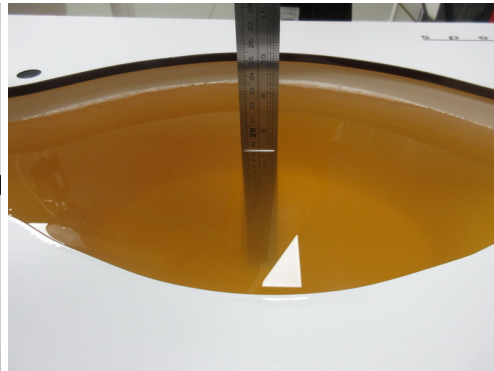
HSL1700-1900\_Body\_16.2cm



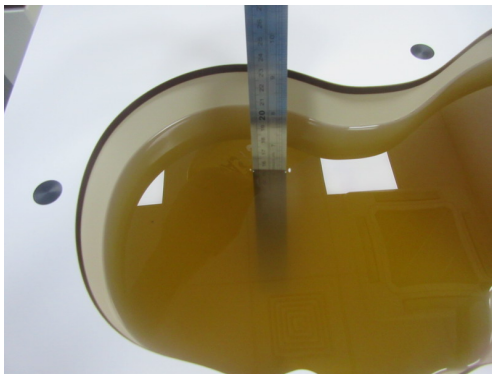
HSL2300-2700\_Head\_15.35cm



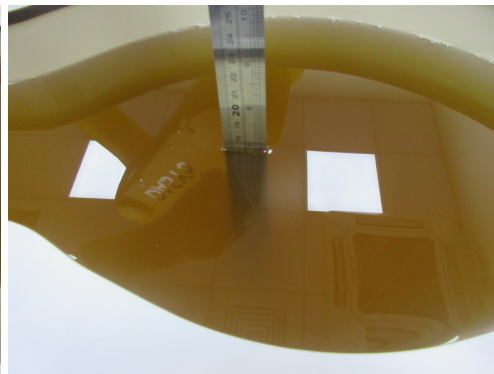
HSL2300-2700\_Body\_18.5cm



HSL5G\_Head\_15.6cm



HSL5G\_Body\_17.5cm



## **Appendix A. SAR Plots of System Verification**

(Pls See BTL-FCC SAR-1-2008C120\_Appendix A.)

## **Appendix B. SAR Plots of SAR Measurement**

(Pls See BTL-FCC SAR-1-2008C120\_Appendix B.)

## **Appendix C. Calibration Certificate**

(Pls See BTL-FCC SAR-1-2008C120\_Appendix C.)

## **Appendix D. Photographs of the Test Set-Up**

(Pls See BTL-FCC SAR-1-2008C120\_Appendix D.)

## **Appendix E. Antenna location**

(Pls See BTL-FCC SAR-1-2008C120\_Appendix E.)

**End of Test Report**