



# **CERTIFICATION TEST REPORT**

**Report Number. :** 12696946-E7V3

**Applicant :** APPLE INC.  
1 APPLE PARK WAY  
CUPERTINO, CA 95014, U.S.A

**Model :** A2111, A2222 AND A2223

**FCC ID :** BCG-E3309A

**EUT Description :** SMARTPHONE

**Test Standard(s) :** FCC CFR47 PART 22H, 24E, 27, 90S, AND 96

**Date Of Issue:**  
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NVLAP Lab code: 200065-0

Revision History

| Rev. | Issue Date | Revisions                | Revised By       |
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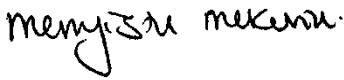
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## 1. ATTESTATION OF TEST RESULTS

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Applicant Name and Address                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | APPLE INC.<br>1 APPLE PARK WAY,<br>CUPERTINO, CA 95014, U.S.A.                       |
| Model                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A2111, A2222 AND A2223                                                               |
| FCC ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | BCG-E3309A                                                                           |
| EUT Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SMARTPHONE                                                                           |
| Serial Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | C7CYQ004MT74 (Conducted), C7CYP0F0MT5Q (Radiated)                                    |
| Date Tested                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | FEBRUARY 18, 2019 to AUGUST 05, 2019                                                 |
| Applicable Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PART 22H, 24E, 27, 90S, AND 96                                                       |
| Test Results                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | COMPLIES                                                                             |
| <p>UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.</p> <p>The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.</p> <p>This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.</p> |                                                                                      |
| Approved & Released By:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Prepared By:                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| Mengistu Mekuria<br>Project Engineer<br>UL Verification Services Inc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Lieu Nguyen<br>Laboratory Engineer<br>UL Verification Services Inc.                  |

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.26:2015, FCC CFR 47 Part 2, Part 22, Part 24, Part 27, Part 90S, Part 90S, and 96, FCC KDB 971168 D01 v03r01/ D02 v02r01, KDB 412172 D01 v01r01.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

| 47173 Benicia Street                                         | 47266 Benicia Street                              | 47658 Kato Rd.                                     |
|--------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------|
| <input type="checkbox"/> Chamber A (ISED:2324B-1)            | <input type="checkbox"/> Chamber D (ISED:22541-1) | <input type="checkbox"/> Chamber I (ISED: 2324A-5) |
| <input checked="" type="checkbox"/> Chamber B (ISED:2324B-2) | <input type="checkbox"/> Chamber E (ISED:22541-2) | <input type="checkbox"/> Chamber J (ISED: 2324A-6) |
| <input type="checkbox"/> Chamber C (ISED:2324B-3)            | <input type="checkbox"/> Chamber F (ISED:22541-3) | <input type="checkbox"/> Chamber K (ISED: 2324A-1) |
|                                                              | <input type="checkbox"/> Chamber G (ISED:22541-4) | <input type="checkbox"/> Chamber L (ISED: 2324A-3) |
|                                                              | <input type="checkbox"/> Chamber H (ISED:22541-5) |                                                    |

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

#### RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)  
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

#### MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.  
36.5 dBuV + 0 dB + 10.1 dB + 0 dB = 46.6 dBuV

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER                                | UNCERTAINTY |
|------------------------------------------|-------------|
| Conducted Disturbance, 9KHz to 0.15 MHz  | 3.84 dB     |
| Conducted Disturbance, 0.15 to 30 MHz    | 3.65 dB     |
| Radiated Disturbance, 9KHz to 30 MHz     | 2.52 dB     |
| Radiated Disturbance, 30 to 1000 MHz     | 4.88 dB     |
| Radiated Disturbance, 1000 to 18000 MHz  | 4.24 dB     |
| Radiated Disturbance, 18000 to 26000 MHz | 4.37 dB     |
| Radiated Disturbance, 26000 to 40000 MHz | 5.17 dB     |
| Occupied Channel Bandwidth               | ±0.39 %     |
| Temperature                              | ±0.9 °C     |
| Supply voltages                          | ±0.45 %     |
| Time                                     | ±0.02 %     |

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, TD-SCDMA, CDMA, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wide band, GPS and NFC. All models support at least one UICC based SIM. The second SIM, if present, is either UICC based pSIM (physical SIM) or e-SIM (electronic SIM). The device has a built-in inductive charging receiver. The rechargeable battery is also not user accessible.

### 5.2. DIFFERENCE IN MODEL NUMBER

Model A2111, A2222 and A2223 is electrically identical to Model 2111. Three model numbers are allocated for marketing and logistic purposes only. A2111 was used to perform all final tests.

### 5.3. MAXIMUM OUTPUT POWER

#### ERP/EIRP LIMIT

FCC: \$2.1046, \$22.913, \$24.232, \$27.50, \$90.635, and \$90.541

#### EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015  
KDB 971168 D01 Section 5.6

$$\text{ERP/EIRP} = \text{PMeas} + \text{GT} - \text{LC}$$

where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);

PMeas = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

EUT includes different power levels for head use configuration and body use configuration and the below tables contain the highest of all configurations average conducted and ERP/EIRP output powers as follows:

## LTE BAND 2

| Part 24            |            |                     |                       |                         |                    |                  |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|--------------------|------------------|--------------|---------------------|
| EIRP Limit (W)     |            | 2.00                |                       |                         |                    |                  |              |                     |
| Antenna Gain (dBi) |            | -2.00               |                       |                         |                    |                  |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
| 1.4                | QPSK       | 1850.7              | 1909.3                | 25.7                    | 23.67              | 0.233            | 1086.5       | 1M09G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 22.93              | 0.196            | 1086.8       | 1M09D7W             |
|                    | 64QAM      |                     |                       | 23.5                    | 21.48              | 0.140            | 1093         | 1M09D7W             |
| 3.0                | QPSK       | 1851.5              | 1908.5                | 25.6                    | 23.62              | 0.230            | 2690.9       | 2M69G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 22.86              | 0.193            | 2701.1       | 2M70D7W             |
|                    | 64QAM      |                     |                       | 23.4                    | 21.44              | 0.139            | 2710         | 2M71D7W             |
| 5.0                | QPSK       | 1852.5              | 1907.5                | 25.7                    | 23.65              | 0.232            | 4498.5       | 4M50G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 23.00              | 0.200            | 4504.1       | 4M50D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 21.70              | 0.148            | 4502.6       | 4M50D7W             |
| 10.0               | QPSK       | 1855.0              | 1905.0                | 25.7                    | 23.70              | 0.234            | 8995.2       | 9M00G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 23.05              | 0.202            | 8997.9       | 9M00D7W             |
|                    | 64QAM      |                     |                       | 23.6                    | 21.63              | 0.145            | 9009.5       | 9M01D7W             |
| 15.0               | QPSK       | 1857.5              | 1902.5                | 25.7                    | 23.69              | 0.234            | 13425.8      | 13M4G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 23.05              | 0.202            | 13420.1      | 13M4D7W             |
|                    | 64QAM      |                     |                       | 23.6                    | 21.58              | 0.144            | 13493        | 13M5D7W             |
| 20.0               | QPSK       | 1860.0              | 1900.0                | 25.7                    | 23.68              | 0.234            | 17907.6      | 17M9G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 23.10              | 0.204            | 17932.9      | 17M9D7W             |
|                    | 64QAM      |                     |                       | 23.8                    | 21.78              | 0.151            | 17947        | 17M9D7W             |

## LTE BAND 5

| Part 22H           |            |                     |                       |                         |                   |                 |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|-------------------|-----------------|--------------|---------------------|
| ERP Limit (W)      |            | 7.00                |                       |                         |                   |                 |              |                     |
| Antenna Gain (dBi) |            | -3.20               |                       |                         |                   |                 |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | ERP Average (dBm) | ERP Average (W) | 99% BW (kHz) | Emission Designator |
| 1.4                | QPSK       | 824.7               | 848.3                 | 25.6                    | 20.24             | 0.106           | 1087.7       | 1M09G7W             |
|                    | 16QAM      |                     |                       | 24.8                    | 19.43             | 0.088           | 1087.1       | 1M09D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 18.39             | 0.069           | 1091         | 1M09D7W             |
| 3.0                | QPSK       | 825.5               | 847.5                 | 25.6                    | 20.23             | 0.105           | 2689.6       | 2M69G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 19.56             | 0.090           | 2694.5       | 2M69D7W             |
|                    | 64QAM      |                     |                       | 23.8                    | 18.44             | 0.070           | 2706.9       | 2M71D7W             |
| 5.0                | QPSK       | 826.5               | 846.5                 | 25.7                    | 20.30             | 0.107           | 4503.2       | 4M50G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.63             | 0.092           | 4511.4       | 4M51D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 18.56             | 0.072           | 4503         | 4M50D7W             |
| 10.0               | QPSK       | 829.0               | 844.0                 | 25.7                    | 20.35             | 0.108           | 8992.9       | 8M99G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 19.59             | 0.091           | 8990.5       | 8M99D7W             |
|                    | 64QAM      |                     |                       | 24.0                    | 18.65             | 0.073           | 9011.5       | 9M01D7W             |

### LTE BAND 7

| Part 27            |            |                     |                       |                         |                    |                  |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|--------------------|------------------|--------------|---------------------|
| EIRP Limit (W)     |            | 2.00                |                       |                         |                    |                  |              |                     |
| Antenna Gain (dBi) |            | -2.10               |                       |                         |                    |                  |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0                | QPSK       | 2502.5              | 2567.5                | 25.6                    | 23.53              | 0.226            | 4508.6       | 4M51G7W             |
|                    | 16QAM      |                     |                       | 25.2                    | 23.06              | 0.202            | 4500.6       | 4M50D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.81              | 0.152            | 4501.5       | 4M50D7W             |
| 10.0               | QPSK       | 2505.0              | 2565.0                | 25.7                    | 23.58              | 0.228            | 8997         | 9M00G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 23.05              | 0.202            | 8999.4       | 9M00D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.77              | 0.150            | 9009.1       | 9M01D7W             |
| 15.0               | QPSK       | 2507.5              | 2562.5                | 25.7                    | 23.57              | 0.227            | 13444.6      | 13M4G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 23.03              | 0.201            | 13461.2      | 13M5D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.77              | 0.150            | 13467        | 13M5D7W             |
| 20.0               | QPSK       | 2510.0              | 2560.0                | 25.7                    | 23.60              | 0.229            | 17864.9      | 17M9G7W             |
|                    | 16QAM      |                     |                       | 25.2                    | 23.09              | 0.204            | 17942.8      | 17M9D7W             |
|                    | 64QAM      |                     |                       | 24.0                    | 21.93              | 0.156            | 17935        | 17M9D7W             |

### LTE BAND 12

| Part 27            |            |                     |                       |                         |                   |                 |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|-------------------|-----------------|--------------|---------------------|
| ERP Limit (W)      |            | 3.00                |                       |                         |                   |                 |              |                     |
| Antenna Gain (dBi) |            | -3.40               |                       |                         |                   |                 |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | ERP Average (dBm) | ERP Average (W) | 99% BW (kHz) | Emission Designator |
| 1.4                | QPSK       | 699.7               | 715.3                 | 25.6                    | 20.06             | 0.101           | 1085.5       | 1M09G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 19.31             | 0.085           | 1091.5       | 1M09D7W             |
|                    | 64QAM      |                     |                       | 23.8                    | 18.22             | 0.066           | 1098.8       | 1M10D7W             |
| 3.0                | QPSK       | 700.5               | 714.5                 | 25.5                    | 19.98             | 0.099           | 2687.5       | 2M69G7W             |
|                    | 16QAM      |                     |                       | 24.8                    | 19.28             | 0.085           | 2703.1       | 2M70D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 18.12             | 0.065           | 2706.6       | 2M71D7W             |
| 5.0                | QPSK       | 701.5               | 713.5                 | 25.6                    | 20.03             | 0.101           | 4494.6       | 4M49G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.41             | 0.087           | 4493.8       | 4M49D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 18.30             | 0.068           | 4496.9       | 4M50D7W             |
| 10.0               | QPSK       | 704.0               | 711.0                 | 25.7                    | 20.15             | 0.104           | 8997.2       | 9M00G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.45             | 0.088           | 8998.6       | 9M00D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 18.37             | 0.069           | 9012.3       | 9M01D7W             |

### LTE BAND 13

| Part 27            |            |                     |                       |                         |                   |                 |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|-------------------|-----------------|--------------|---------------------|
| ERP Limit (W)      |            | 3.00                |                       |                         |                   |                 |              |                     |
| Antenna Gain (dBi) |            | -3.80               |                       |                         |                   |                 |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | ERP Average (dBm) | ERP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0                | QPSK       | 779.5               | 784.5                 | 25.6                    | 19.62             | 0.092           | 4479.5       | 4M48G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 18.91             | 0.078           | 4505.2       | 4M51D7W             |
|                    | 64QAM      |                     |                       | 23.3                    | 17.39             | 0.055           | 4498.2       | 4M50D7W             |
| 10.0               | QPSK       | 782.0               | 782.0                 | 25.7                    | 19.75             | 0.094           | 8973.6       | 8M97G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 18.94             | 0.078           | 8974.5       | 8M97D7W             |
|                    | 64QAM      |                     |                       | 23.4                    | 17.40             | 0.055           | 8990.8       | 8M99D7W             |

### LTE BAND 14

| Part 90R           |            |                     |                       |                         |                   |                 |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|-------------------|-----------------|--------------|---------------------|
| ERP Limit (W)      |            | 3.00                |                       |                         |                   |                 |              |                     |
| Antenna Gain (dBi) |            | -4.00               |                       |                         |                   |                 |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | ERP Average (dBm) | ERP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0                | QPSK       | 790.5               | 795.5                 | 25.7                    | 19.55             | 0.090           | 4481.9       | 4M48G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 18.94             | 0.078           | 4480.5       | 4M48D7W             |
|                    | 64QAM      |                     |                       | 23.4                    | 17.21             | 0.053           | 4500.2       | 4M50D7W             |
| 10.0               | QPSK       | 793.0               | 793.0                 | 25.7                    | 19.57             | 0.091           | 9009.2       | 9M01G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 18.90             | 0.078           | 8990.4       | 8M99D7W             |
|                    | 64QAM      |                     |                       | 23.3                    | 17.19             | 0.052           | 9007.9       | 9M01D7W             |

### LTE BAND 17

| Part 27            |            |                     |                       |                         |                   |                 |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|-------------------|-----------------|--------------|---------------------|
| ERP Limit (W)      |            | 3.00                |                       |                         |                   |                 |              |                     |
| Antenna Gain (dBi) |            | -3.40               |                       |                         |                   |                 |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | ERP Average (dBm) | ERP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0                | QPSK       | 706.5               | 713.5                 | 25.6                    | 20.08             | 0.102           | 4507         | 4M51G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.42             | 0.088           | 4512.2       | 4M51D7W             |
|                    | 64QAM      |                     |                       | 23.8                    | 18.29             | 0.067           | 4496.6       | 4M50D7W             |
| 10.0               | QPSK       | 709.0               | 711.0                 | 25.7                    | 20.15             | 0.104           | 8992.2       | 8M99G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.42             | 0.087           | 9014.1       | 9M01D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 18.38             | 0.069           | 9014.4       | 9M01D7W             |

### LTE BAND 25

| Part 24            |            |                     |                       |                         |                    |                  |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|--------------------|------------------|--------------|---------------------|
| EIRP Limit (W)     |            | 2.00                |                       |                         |                    |                  |              |                     |
| Antenna Gain (dBi) |            | -2.00               |                       |                         |                    |                  |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
| 1.4                | QPSK       | 1850.7              | 1914.3                | 25.2                    | 23.24              | 0.211            | 1088.9       | 1M09G7W             |
|                    | 16QAM      |                     |                       | 24.5                    | 22.49              | 0.177            | 1084.3       | 1M08D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 21.71              | 0.148            | 1092.7       | 1M09D7W             |
| 3.0                | QPSK       | 1851.5              | 1913.5                | 25.3                    | 23.35              | 0.216            | 2695.6       | 2M70G7W             |
|                    | 16QAM      |                     |                       | 24.5                    | 22.55              | 0.180            | 2690.2       | 2M69D7W             |
|                    | 64QAM      |                     |                       | 23.5                    | 21.50              | 0.141            | 2705.7       | 2M71D7W             |
| 5.0                | QPSK       | 1852.5              | 1912.5                | 25.6                    | 23.59              | 0.228            | 4506.3       | 4M51G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 22.98              | 0.199            | 4492.9       | 4M49D7W             |
|                    | 64QAM      |                     |                       | 24.0                    | 21.97              | 0.157            | 4500.9       | 4M50D7W             |
| 10.0               | QPSK       | 1855.0              | 1910.0                | 25.7                    | 23.70              | 0.234            | 8992.7       | 8M99G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 23.04              | 0.201            | 8989.7       | 8M99D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.94              | 0.156            | 9026.9       | 9M03D7W             |
| 15.0               | QPSK       | 1857.5              | 1907.5                | 25.6                    | 23.60              | 0.229            | 13453.8      | 13M5G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 22.91              | 0.195            | 13465.4      | 13M5D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.90              | 0.155            | 13498        | 13M5D7W             |
| 20.0               | QPSK       | 1860.0              | 1905.0                | 25.5                    | 23.48              | 0.223            | 17913.5      | 17M9G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 22.88              | 0.194            | 17900.3      | 17M9D7W             |
|                    | 64QAM      |                     |                       | 24.0                    | 21.96              | 0.157            | 17968        | 18M0D7W             |

### LTE BAND 26

| Part 90S           |            |                     |                       |                         |                   |                 |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|-------------------|-----------------|--------------|---------------------|
| ERP Limit (W)      |            | 100.00              |                       |                         |                   |                 |              |                     |
| Antenna Gain (dBi) |            | -3.20               |                       |                         |                   |                 |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | ERP Average (dBm) | ERP Average (W) | 99% BW (kHz) | Emission Designator |
| 1.4                | QPSK       | 814.7               | 823.3                 | 25.6                    | 20.24             | 0.106           | 1092.3       | 1M09G7W             |
|                    | 16QAM      |                     |                       | 24.8                    | 19.47             | 0.089           | 1090.5       | 1M09D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 18.33             | 0.068           | 1094.6       | 1M09D7W             |
| 3.0                | QPSK       | 815.5               | 822.5                 | 25.6                    | 20.23             | 0.105           | 2690.6       | 2M69G7W             |
|                    | 16QAM      |                     |                       | 24.8                    | 19.47             | 0.089           | 2688         | 2M69D7W             |
|                    | 64QAM      |                     |                       | 23.5                    | 18.18             | 0.066           | 2705.1       | 2M71D7W             |
| 5.0                | QPSK       | 816.5               | 821.5                 | 25.7                    | 20.32             | 0.108           | 4503.6       | 4M50G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 19.75             | 0.094           | 4497.1       | 4M50D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 18.37             | 0.069           | 4494.6       | 4M49D7W             |
| 10.0               | QPSK       | 819.0               | 819.0                 | 25.7                    | 20.35             | 0.108           | 9010.3       | 9M01G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.64             | 0.092           | 8978.6       | 8M98D7W             |
|                    | 64QAM      |                     |                       | 23.6                    | 18.27             | 0.067           | 9010.2       | 9M01D7W             |

### LTE BAND 30

| Part 27            |            |                     |                       |                         |                    |                  |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|--------------------|------------------|--------------|---------------------|
| EIRP Limit (W)     |            | 0.25                |                       |                         |                    |                  |              |                     |
| Antenna Gain (dBi) |            | -2.80               |                       |                         |                    |                  |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0                | QPSK       | 2307.5              | 2312.5                | 25.7                    | 22.90              | 0.195            | 4511.1       | 4M51G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 22.34              | 0.171            | 4500.4       | 4M50D7W             |
|                    | 64QAM      |                     |                       | 24.6                    | 21.75              | 0.150            | 4496         | 4M50D7W             |
| 10.0               | QPSK       | 2310.0              | 2310.0                | 25.7                    | 22.86              | 0.193            | 9004.7       | 9M00G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 22.26              | 0.168            | 9030.5       | 9M03D7W             |
|                    | 64QAM      |                     |                       | 24.5                    | 21.69              | 0.148            | 9015.4       | 9M02D7W             |

### LTE BAND 41

| Part 27            |            |                     |                       |                         |                    |                  |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|--------------------|------------------|--------------|---------------------|
| EIRP Limit (W)     |            | 2.00                |                       |                         |                    |                  |              |                     |
| Antenna Gain (dBi) |            | -2.10               |                       |                         |                    |                  |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0                | QPSK       | 2498.5              | 2687.5                | 28.6                    | 26.46              | 0.443            | 4475.4       | 4M48G7W             |
|                    | 16QAM      |                     |                       | 28.1                    | 25.96              | 0.394            | 4469.3       | 4M47D7W             |
|                    | 64QAM      |                     |                       | 26.9                    | 24.76              | 0.299            | 4486.8       | 4M49D7W             |
| 10.0               | QPSK       | 2501.0              | 2685.0                | 28.7                    | 26.60              | 0.457            | 8956.3       | 8M96G7W             |
|                    | 16QAM      |                     |                       | 28.2                    | 26.12              | 0.409            | 8909.7       | 8M91D7W             |
|                    | 64QAM      |                     |                       | 27.0                    | 24.89              | 0.308            | 8994.8       | 8M99D7W             |
| 15.0               | QPSK       | 2503.5              | 2682.5                | 28.7                    | 26.56              | 0.453            | 13414.5      | 13M4G7W             |
|                    | 16QAM      |                     |                       | 28.0                    | 25.93              | 0.392            | 13326.2      | 13M3D7W             |
|                    | 64QAM      |                     |                       | 26.9                    | 24.84              | 0.305            | 13465        | 13M5D7W             |
| 20.0               | QPSK       | 2506.0              | 2680.0                | 28.7                    | 26.56              | 0.453            | 17905.1      | 17M9G7W             |
|                    | 16QAM      |                     |                       | 28.2                    | 26.12              | 0.409            | 17898.9      | 17M9D7W             |
|                    | 64QAM      |                     |                       | 27.0                    | 24.93              | 0.311            | 17924        | 17M9D7W             |

#### LTE BAND 48

| Part 96 / RSS 192  |            |                     |                       |                         |                    |                  |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|--------------------|------------------|--------------|---------------------|
| EIRP Limit (W)     |            | 2.00                |                       |                         |                    |                  |              |                     |
| Antenna Gain (dBi) |            | -2.70               |                       |                         |                    |                  |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0                | QPSK       | 3552.5              | 3697.5                | 25.4                    | 22.70              | 0.186            | 4466.9       | 4M47G7W             |
|                    | 16QAM      |                     |                       | 25.4                    | 22.74              | 0.188            | 4482.4       | 4M48D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 21.01              | 0.126            | 4488.9       | 4M49D7W             |
| 10.0               | QPSK       | 3555.0              | 3695.0                | 25.7                    | 23.00              | 0.200            | 8959.8       | 8M96G7W             |
|                    | 16QAM      |                     |                       | 25.6                    | 22.90              | 0.195            | 8926.5       | 8M93D7W             |
|                    | 64QAM      |                     |                       | 23.8                    | 21.08              | 0.128            | 8953.2       | 8M95D7W             |
| 15.0               | QPSK       | 3557.5              | 3692.5                | 25.6                    | 22.90              | 0.195            | 13394.2      | 13M4G7W             |
|                    | 16QAM      |                     |                       | 25.5                    | 22.80              | 0.191            | 13432.1      | 13M4D7W             |
|                    | 64QAM      |                     |                       | 23.8                    | 21.07              | 0.128            | 13434        | 13M4D7W             |
| 20.0               | QPSK       | 3560.0              | 3690.0                | 25.7                    | 23.00              | 0.200            | 17899.6      | 17M9G7W             |
|                    | 16QAM      |                     |                       | 25.7                    | 23.00              | 0.200            | 17928.6      | 17M9D7W             |
|                    | 64QAM      |                     |                       | 24.1                    | 21.39              | 0.138            | 17882        | 17M9D7W             |

#### LTE BAND 66

| Part 27            |            |                     |                       |                         |                    |                  |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|--------------------|------------------|--------------|---------------------|
| EIRP Limit (W)     |            | 1.00                |                       |                         |                    |                  |              |                     |
| Antenna Gain (dBi) |            | -2.20               |                       |                         |                    |                  |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | EIRP Average (dBm) | EIRP Average (W) | 99% BW (kHz) | Emission Designator |
| 1.4                | QPSK       | 1710.7              | 1779.3                | 25.7                    | 23.46              | 0.222            | 1084.1       | 1M08G7W             |
|                    | 16QAM      |                     |                       | 24.8                    | 22.61              | 0.182            | 1088.6       | 1M09D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 21.54              | 0.143            | 1092.8       | 1M09D7W             |
| 3.0                | QPSK       | 1711.5              | 1778.5                | 25.7                    | 23.50              | 0.224            | 2701         | 2M70G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 22.79              | 0.190            | 2686.2       | 2M69D7W             |
|                    | 64QAM      |                     |                       | 23.7                    | 21.53              | 0.142            | 2698.6       | 2M70D7W             |
| 5.0                | QPSK       | 1712.5              | 1777.5                | 25.5                    | 23.34              | 0.216            | 4510.2       | 4M51G7W             |
|                    | 16QAM      |                     |                       | 24.8                    | 22.61              | 0.182            | 4499.5       | 4M50D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.72              | 0.149            | 4494.6       | 4M49D7W             |
| 10.0               | QPSK       | 1715.0              | 1775.0                | 25.6                    | 23.40              | 0.219            | 8970.6       | 8M97G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 22.72              | 0.187            | 8987.7       | 8M99D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.66              | 0.147            | 8997.8       | 9M00D7W             |
| 15.0               | QPSK       | 1717.5              | 1772.5                | 25.5                    | 23.34              | 0.216            | 13441        | 13M4G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 22.75              | 0.188            | 13445.6      | 13M4D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.65              | 0.146            | 13477        | 13M5D7W             |
| 20.0               | QPSK       | 1720.0              | 1770.0                | 25.6                    | 23.42              | 0.220            | 17872.6      | 17M9G7W             |
|                    | 16QAM      |                     |                       | 25.1                    | 22.86              | 0.193            | 17922.9      | 17M9D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 21.74              | 0.149            | 17940        | 17M9D7W             |

**LTE BAND 71**

| Part 27            |            |                     |                       |                         |                   |                 |              |                     |
|--------------------|------------|---------------------|-----------------------|-------------------------|-------------------|-----------------|--------------|---------------------|
| ERP Limit (W)      |            | 3.00                |                       |                         |                   |                 |              |                     |
| Antenna Gain (dBi) |            | -3.50               |                       |                         |                   |                 |              |                     |
| Bandwidth (MHz)    | Modulation | Low Frequency (MHz) | Upper Frequency (MHz) | Conducted Average (dBm) | ERP Average (dBm) | ERP Average (W) | 99% BW (kHz) | Emission Designator |
| 5.0                | QPSK       | 665.5               | 695.5                 | 25.6                    | 19.95             | 0.099           | 4486.9       | 4M49G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.40             | 0.087           | 4493.1       | 4M49D7W             |
|                    | 64QAM      |                     |                       | 23.8                    | 18.15             | 0.065           | 4493.4       | 4M49D7W             |
| 10.0               | QPSK       | 668.0               | 693.0                 | 25.7                    | 20.05             | 0.101           | 8979.6       | 8M98G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.38             | 0.087           | 8982.3       | 8M98D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 18.23             | 0.067           | 9020.7       | 9M02D7W             |
| 15.0               | QPSK       | 670.5               | 690.5                 | 25.6                    | 19.97             | 0.099           | 13433.1      | 13M4G7W             |
|                    | 16QAM      |                     |                       | 24.9                    | 19.29             | 0.085           | 13440.2      | 13M4D7W             |
|                    | 64QAM      |                     |                       | 23.9                    | 18.25             | 0.067           | 13476        | 13M5D7W             |
| 20.0               | QPSK       | 673.0               | 688.0                 | 25.6                    | 19.93             | 0.098           | 17902.7      | 17M9G7W             |
|                    | 16QAM      |                     |                       | 25.0                    | 19.31             | 0.085           | 17833.7      | 17M8D7W             |
|                    | 64QAM      |                     |                       | 24.0                    | 18.38             | 0.069           | 17910        | 17M9D7W             |

## 5.4. SOFTWARE AND FIRMWARE

The EUT Firmware installed during testing was version: 19-01.1919.01\_27-0.22.00-27.

## 5.5. MAXIMUM ANTENNA GAIN

Please see table below:

| LTE Bands                                 | ANT 1<br>Antenna<br>Gain (dBi) | ANT 2<br>Antenna<br>Gain (dBi) | ANT 3<br>Antenna<br>Gain (dBi) | ANT 4<br>Antenna<br>Gain (dBi) |
|-------------------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| LTE Band 2, 1850 – 1910 MHz               | -2.0                           | -1.1                           | -                              | -                              |
| LTE Band 4, 1710 – 1755 MHz               | -2.2                           | -1.9                           | -                              | -                              |
| LTE Band 5, 824 – 849 MHz                 | -3.2                           | -5.4                           | -                              | -                              |
| LTE Band 7, 2500 – 2570 MHz               | -2.1                           | -3.7                           | -                              | -                              |
| LTE Band 12, 699 – 716 MHz                | -3.4                           | -4.4                           | -                              | -                              |
| LTE Band 13, 777 – 787 MHz                | -3.8                           | -5.2                           | -                              | -                              |
| LTE Band 14, 788 – 798 MHz                | -4.0                           | -5.3                           | -                              | -                              |
| LTE Band 17, 704 – 716 MHz                | -3.4                           | -4.4                           | -                              | -                              |
| LTE Band 25, 1850 – 1915 MHz              | -2.0                           | -1.1                           | -                              | -                              |
| LTE Band 26, 814 – 824 MHz (FCC Part 90S) | -3.2                           | -5.4                           | -                              | -                              |
| LTE Band 30, 2305 – 2315 MHz              | -2.8                           | -5.0                           | -                              | -                              |
| LTE Band 41, 2496 – 2690 MHz (FCC)        | -2.1                           | -3.7                           | -                              | -                              |
| LTE Band 48, 3550 – 3700 MHz              | -                              | -                              | -2.7                           | -5.3                           |
| LTE Band 66, 1710 – 1780 MHz              | -2.2                           | -1.9                           | -                              | -                              |
| LTE Band 71, 663 – 698 MHz (FCC)          | -3.5                           | -4.0                           | -                              | -                              |

### Note:

Conducted Port 1 can support Ant 1 and Ant 3 while Port 2 supports Ant 2 and Ant 4. These ports have a switching system between the two antennas of different frequency ranges.

## 5.6. WORST-CASE CONFIGURATION AND MODE

The EUT supports LTE Bands of:

Band 2, Band 4, Band 5, Band 7, Band 12, Band 13, Band 14, Band 17, Band 25, Band 26, Band 30, Band 41, Band 48, Band 66 and Band 71.

LTE Band 4 (1710-1755MHz, 5/10/15/20MHz bandwidth) is covered by LTE Band 66 because it is a subset of LTE band 66 and they have same output power.

FCC rule Part 22.905 of LTE Band 26 (824-849MHz) is covered by LTE Band 5 of same rule since they have the same output power and supported bandwidths.

The worst-case scenario for all measurements is based on the average conducted output power measurement investigation results. Output power measurements were measured on QPSK, 16QAM and 64QAM modulations. It was found that QPSK and 16QAM results were worst case. All testing was performed using QPSK and 16QAM modulations to represent the worst case. Tests were performed on the conducted test at Ant 1 antenna as worst case since it has higher output powers.

The EUT was investigated in three orthogonal orientations X/Y/Z on both Ant 1 and Ant 2 antennas. For Ant 1 antenna, it was determined that X (Flatbed) orientation was worst-case orientation for cell and 48 bands; Y(Landscape) orientation was worst-case orientation for pcs, 7, 30, 38 and 41 bands without AC/DC adapter. For Ant 2 antenna, it was determined that X (Flatbed) orientation was worst-case orientation for all bands without AC/DC adapter.

Radiated spurious emissions were investigated below 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found on below 30MHz and 30MHz-1GHz.

For simultaneous transmission of multiple channels in the 2.4GHz/5GH WLAN, UWB, and Cellular bands, tests were conducted for various configurations having the highest power, least separation in frequencies and widest operation bandwidths. No noticeable new emission was found.

## 5.7. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

| Support Equipment List |              |               |                   |
|------------------------|--------------|---------------|-------------------|
| Description            | Manufacturer | Model         | Serial Number     |
| Laptop AC/DC adapter   | Apple        | 85W MagSafe 2 | C0651730MMMG6P4AL |
| Laptop                 | Apple        | Macbook Pro   | C02PM012G3QD      |
| Laptop                 | Apple        | Macbook Pro   | C02P52HGG085      |

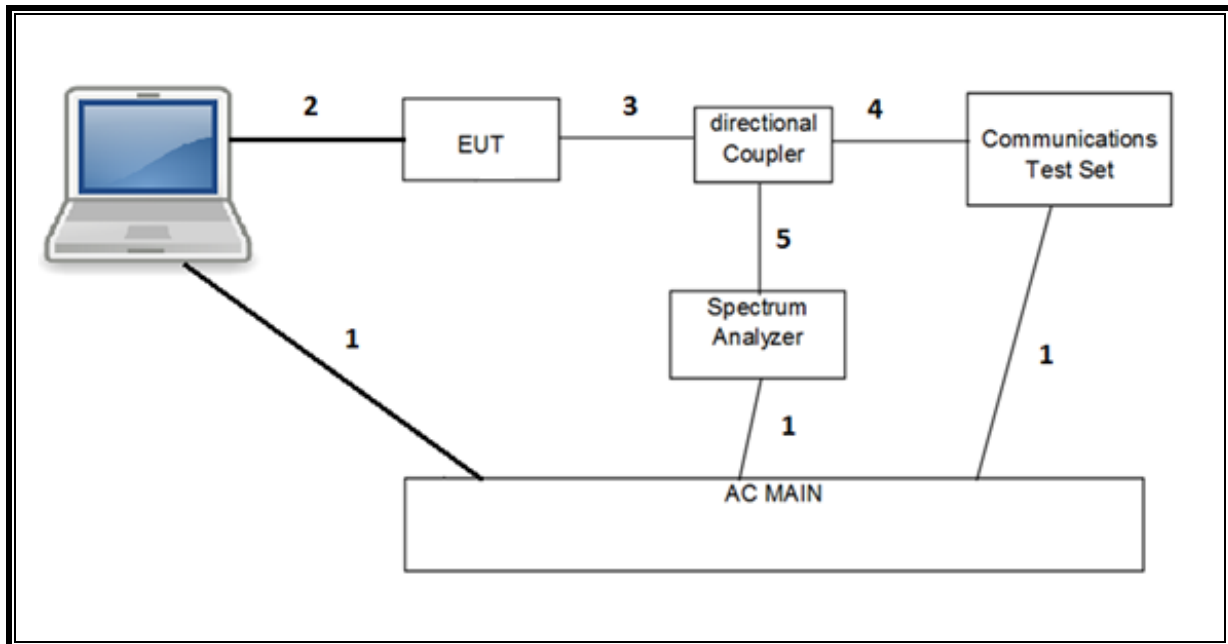
### I/O CABLES (RF Conducted Test)

| I/O Cable List |           |                      |                        |             |                  |         |
|----------------|-----------|----------------------|------------------------|-------------|------------------|---------|
| Cable No       | Port      | # of identical ports | Connector Type         | Cable Type  | Cable Length (m) | Remarks |
| 1              | AC        | 3                    | US 115V                | Un-shielded | 2.0m             | N/A     |
| 2              | USB       | 1                    | DC                     | Un-shielded | 1.0m             | N/A     |
| 3              | RF In/Out | 1                    | EUT                    | Un-shielded | 0.6m             | N/A     |
| 4              | RF In/Out | 1                    | Communication Test Set | Un-shielded | 1.2m             | N/A     |
| 5              | RF In/Out | 1                    | Barrel                 | N/A         | N/A              | N/A     |

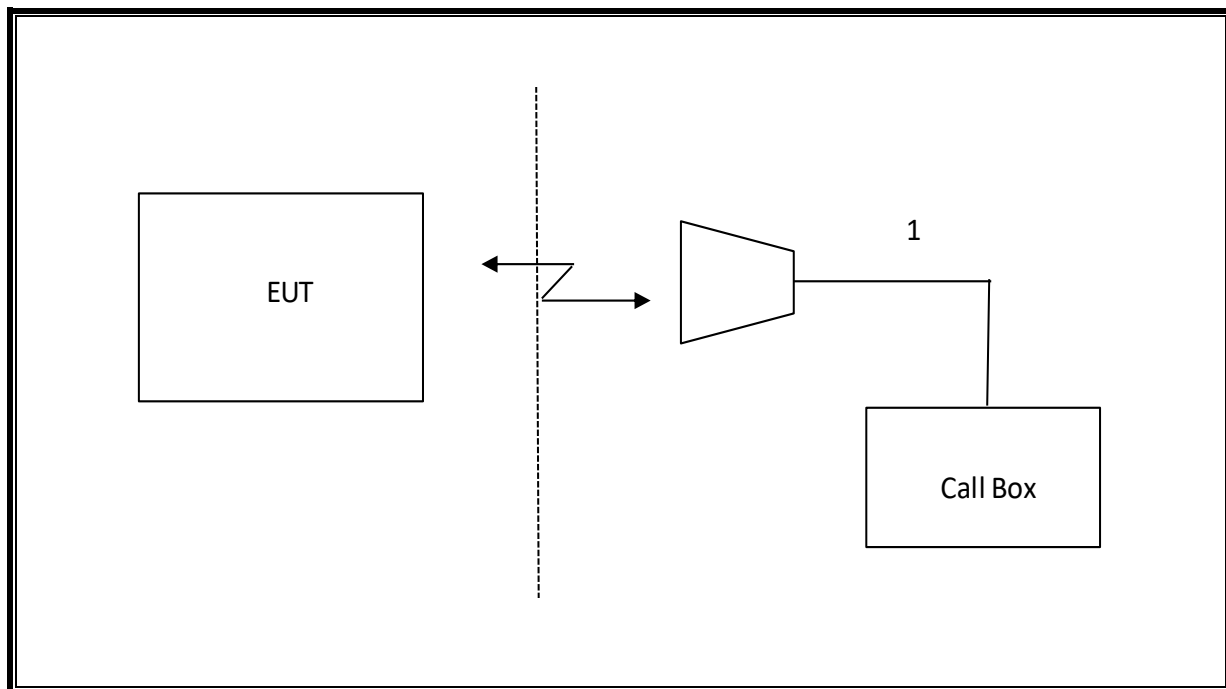
### I/O CABLES (RF Radiated Test)

| I/O Cable List |           |                      |                |             |                  |         |
|----------------|-----------|----------------------|----------------|-------------|------------------|---------|
| Cable No       | Port      | # of identical ports | Connector Type | Cable Type  | Cable Length (m) | Remarks |
| 1              | RF In/Out | 1                    | Antenna        | Un-shielded | 5.0m             | N/A     |

**CONDUCTED SETUP**



**RADIATED SETUP**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| TEST EQUIPMENT LIST                              |                     |                        |                         |            |
|--------------------------------------------------|---------------------|------------------------|-------------------------|------------|
| Description                                      | Manufacturer        | Model                  | Asset                   | Cal Due    |
| Amplifier, 10KHz to 1GHz, 32dB                   | Sonoma              | 310N                   | T15                     | 08/15/2019 |
| Amplifier, 18-26GHz                              | Agilent             | 8449B                  | T404                    | 3/23/2020  |
| Amplifier, 26-40GHz                              | Miteq               | TTA2640                | T1804                   | 3/23/2020  |
| Spectrum Analyzer, PXA 3Hz to 44GHz              | Agilent             | N9030A                 | T905                    | 1/24/2020  |
| Spectrum Analyzer, PXA 3Hz to 44GHz              | Keysight            | N9030A                 | T340                    | 01/22/2020 |
| Spectrum Analyzer, PXA 3Hz to 44GHz              | Keysight            | N9030A                 | T1454                   | 01/23/2020 |
| Spectrum Analyzer, PXA 3Hz to 44GHz              | Keysight            | N9030A                 | T908                    | 01/23/2020 |
| Spectrum Analyzer, PXA 3Hz to 44GHz              | Keysight            | N9030A                 | T339                    | 01/29/2020 |
| Amplifier, 1 to 18GHz                            | MITEQ               | AFS42-00101800-25-S-42 | T931                    | 05/11/2020 |
| Amplifier, 10KHz to 1GHz, 32dB                   | Sonoma              | 310N                   | PRE0180176              | 11/01/2019 |
| Spectrum Analyzer, PSA, 3Hz to 44GHz             | Keysight            | E4446A                 | T177                    | 04/12/2019 |
| Spectrum Analyzer, PSA, 3Hz to 44GHz             | Keysight            | E4446A                 | T123                    | 01/28/2020 |
| Spectrum Analyzer, PSA, 3Hz to 44GHz             | Keysight            | E4440A                 | T198                    | 01/30/2020 |
| Spectrum Analyzer, PSA, 3Hz to 44GHz             | Keysight            | E4440A                 | T99                     | 1/28/2020  |
| Directional Coupler                              | KRYTAR              | 152610                 | T1536                   | 04/27/2019 |
| Directional Coupler                              | KRYTAR              | 152610                 | T1537                   | 04/27/2019 |
| Wireless Communications Test Set, 8960 Series 10 | Agilent             | E5515C                 | T211                    | 05/10/2020 |
| Filter, HPF 3.0GHz                               | Micro-Tronics       | HPM17543               | T487                    | 12/04/2019 |
| Filter, HPF 1.2GHz                               | Micro-Tronics       | WHKX1.2/15G-6ST        | T1182                   | 05/19/2019 |
| Spectrum Analyzer, PXA, 3Hz to 44GHz             | Keysight            | N9030A                 | T459                    | 07/25/2019 |
| Wideband Communication Test Set, Call Box        | R&S GmbH & Co. KG   | CMW500                 | T959                    | 02/16/2020 |
| Wideband Communication Test Set, Call Box        | R&S GmbH & Co. KG   | CMW500                 | T1871                   | 02/18/2020 |
| Wideband Communication Test Set, Call Box        | R&S GmbH & Co. KG   | CMW500                 | T921                    | 02/18/2020 |
| Wideband Communication Test Set, Call Box        | R&S GmbH & Co. KG   | CMW500                 | T376                    | 02/21/2020 |
| Wideband Communication Test Set, Call Box        | R&S GmbH & Co. KG   | CMW500                 | T958                    | 02/20/2020 |
| Chamber, Environmental                           | Cincinnati Sub Zero | ZPHS-8-3.5-SCT/WC      | T754                    | 08/15/2019 |
| Power Meter, P-series single channel             | Keysight            | N1911A                 | T1268                   | 01/31/2020 |
| Power Sensor                                     | Keysight            | N1921A                 | T1228                   | 07/10/2019 |
| Antenna, Horn 1-18GHz                            | ETS Lindgren        | 3117                   | T346                    | 05/14/2020 |
| Antenna, Horn 1-18GHz                            | ETS Lindgren        | 3117                   | T344                    | 05/07/2020 |
| Antenna, Horn 18-26GHz                           | ARA                 | MWH-1826/B             | T447                    | 6/16/2019  |
| Antenna, Horn 26-40GHz                           | ARA                 | MWH-2640/B             | T446                    | 8/9/2019   |
| Antenna, Broadband Hybrid, 30MHz to 2000MHz      | Sunol Sciences      | JB3                    | PRE0181574              | 08/01/2019 |
| Antenna, Broadband Hybrid, 30MHz to 2000MHz      | Sunol Sciences      | JB3                    | PRE0077974              | 05/13/2020 |
| Antenna, Active Loop 9KHz to 30MHz               | EMCO                | 6502                   | T1616                   | 10/18/2019 |
| UL AUTOMATION SOFTWARE                           |                     |                        |                         |            |
| CLT Software                                     | UL                  | UL RF                  | Ver 9.5, April 26, 2016 |            |
| Power Measurement Software                       | UL                  | UL RF                  | Ver 2.2, June 2017      |            |

### NOTES:

- For equipment listed above that had a calibration due during the testing period, its use was paused to allow for calibration.

## 7. RF OUTPUT POWER VERIFICATION

### CONDUCTED OUTPUT POWER MEASUREMENT PROCEDURE

All LTE bands conducted average power is obtained from the CMW500 telecommunication test set.

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). 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 1, 2 and 3**

| Modulation | Channel bandwidth / Transmission bandwidth ( $N_{RB}$ ) |         |       |        |        |        | MPR (dB) |
|------------|---------------------------------------------------------|---------|-------|--------|--------|--------|----------|
|            | 1.4 MHz                                                 | 3.0 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz |          |
| QPSK       | > 5                                                     | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 1      |
| 16 QAM     | ≤ 5                                                     | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18   | ≤ 1      |
| 16 QAM     | > 5                                                     | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 2      |
| 64 QAM     | ≤ 5                                                     | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18   | ≤ 2      |
| 64 QAM     | > 5                                                     | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 3      |

The allowed A-MPR values specified below in Table 6.2.4-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS\_01".3

**Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)**

| Network Signalling value | Requirements (sub-clause) | E-UTRA Band              | Channel bandwidth (MHz) | Resources Blocks ( $N_{RB}$ ) | A-MPR (dB)    |
|--------------------------|---------------------------|--------------------------|-------------------------|-------------------------------|---------------|
| NS_01                    | 6.6.2.1.1                 | Table 5.5-1              | 1.4, 3, 5, 10, 15, 20   | Table 5.6-1                   | NA            |
| NS_03                    | 6.6.2.2.1                 | 2, 4, 10, 23, 25, 35, 36 | 3                       | >5                            | ≤ 1           |
|                          |                           |                          | 5                       | >6                            | ≤ 1           |
|                          |                           |                          | 10                      | >6                            | ≤ 1           |
|                          |                           |                          | 15                      | >8                            | ≤ 1           |
|                          |                           |                          | 20                      | >10                           | ≤ 1           |
| NS_04                    | 6.6.2.2.2                 | 41                       | 5                       | >6                            | ≤ 1           |
|                          |                           |                          | 10, 15, 20              | See Table 6.2.4-4             |               |
| NS_05                    | 6.6.3.3.1                 | 1                        | 10, 15, 20              | ≥ 50                          | ≤ 1           |
| NS_06                    | 6.6.2.2.3                 | 12, 13, 14, 17           | 1.4, 3, 5, 10           | Table 5.6-1                   | n/a           |
| NS_07                    | 6.6.2.2.3<br>6.6.3.3.2    | 13                       | 10                      | Table 6.2.4-2                 | Table 6.2.4-2 |
| NS_08                    | 6.6.3.3.3                 | 19                       | 10, 15                  | > 44                          | ≤ 3           |
| NS_09                    | 6.6.3.3.4                 | 21                       | 10, 15                  | > 40                          | ≤ 1           |
|                          |                           |                          |                         | > 55                          | ≤ 2           |
| NS_10                    |                           | 20                       | 15, 20                  | Table 6.2.4-3                 | Table 6.2.4-3 |
| NS_11                    | 6.6.2.2.1                 | 23 <sup>1</sup>          | 1.4, 3, 5, 10           | Table 6.2.4-5                 | Table 6.2.4-5 |
| ..                       |                           |                          |                         |                               |               |
| NS_32                    | -                         | -                        | -                       | -                             | -             |

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

## 7.1. LTE BAND 2

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/27/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 2 (1.4 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 18607                   | 18900      | 19193      | 18607                   | 18900      | 19193      |
|                 |            |               |           | 1850.7 MHz              | 1880.0 MHz | 1909.3 MHz | 1850.7 MHz              | 1880.0 MHz | 1909.3 MHz |
| 1.4             | QPSK       | 1             | 0         | 25.1                    | 25.2       | 25.7       | 18.4                    | 17.9       | 18.1       |
|                 |            | 1             | 2         | 25.1                    | 25.2       | 25.7       | 18.4                    | 17.9       | 18.1       |
|                 |            | 1             | 5         | 25.2                    | 25.1       | 25.6       | 18.4                    | 17.9       | 18.1       |
|                 |            | 3             | 0         | 25.0                    | 25.0       | 25.5       | 18.3                    | 17.8       | 17.9       |
|                 |            | 3             | 1         | 25.1                    | 25.0       | 25.5       | 18.4                    | 17.8       | 17.9       |
|                 |            | 3             | 2         | 25.1                    | 24.9       | 25.4       | 18.3                    | 17.8       | 17.9       |
|                 |            | 6             | 0         | 24.0                    | 24.0       | 24.4       | 17.2                    | 16.8       | 16.8       |
|                 | 16QAM      | 1             | 0         | 24.3                    | 24.4       | 24.9       | 17.6                    | 17.2       | 17.4       |
|                 |            | 1             | 2         | 24.4                    | 24.3       | 24.8       | 17.5                    | 17.1       | 17.3       |
|                 |            | 1             | 5         | 24.4                    | 24.3       | 24.9       | 17.5                    | 17.2       | 17.3       |
|                 |            | 3             | 0         | 24.1                    | 24.1       | 24.6       | 17.3                    | 16.9       | 17.0       |
|                 |            | 3             | 1         | 24.1                    | 24.1       | 24.6       | 17.3                    | 16.8       | 17.0       |
|                 |            | 3             | 2         | 24.1                    | 24.0       | 24.6       | 17.2                    | 16.8       | 17.0       |
|                 |            | 6             | 0         | 23.0                    | 22.8       | 23.5       | 16.2                    | 15.7       | 16.0       |
|                 | 64QAM      | 1             | 0         | 23.3                    | 23.0       | 23.4       | 16.6                    | 16.1       | 16.3       |
|                 |            | 1             | 2         | 23.3                    | 22.9       | 23.3       | 16.6                    | 16.1       | 16.3       |
|                 |            | 1             | 5         | 23.3                    | 22.9       | 23.5       | 16.7                    | 16.2       | 16.4       |
|                 |            | 3             | 0         | 23.0                    | 22.7       | 23.2       | 16.4                    | 16.0       | 16.1       |
|                 |            | 3             | 1         | 23.0                    | 22.7       | 23.2       | 16.3                    | 16.0       | 16.2       |
|                 |            | 3             | 2         | 23.0                    | 22.7       | 23.2       | 16.3                    | 15.9       | 16.2       |
|                 |            | 6             | 0         | 21.9                    | 21.7       | 22.1       | 15.2                    | 14.9       | 15.1       |

### OUTPUT POWER FOR LTE BAND 2 (3.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 18615                   | 18900      | 19185      | 18615                   | 18900      | 19185      |
|                 |            |               |           | 1851.5 MHz              | 1880.0 MHz | 1908.5 MHz | 1851.5 MHz              | 1880.0 MHz | 1908.5 MHz |
| 3.0             | QPSK       | 1             | 0         | 25.1                    | 25.1       | 25.5       | 18.4                    | 17.8       | 18.1       |
|                 |            | 1             | 7         | 25.3                    | 25.0       | 25.6       | 18.3                    | 17.9       | 18.1       |
|                 |            | 1             | 14        | 25.2                    | 25.0       | 25.5       | 18.3                    | 17.8       | 18.0       |
|                 |            | 8             | 0         | 24.0                    | 24.0       | 24.4       | 17.2                    | 16.7       | 17.0       |
|                 |            | 8             | 4         | 24.0                    | 24.0       | 24.4       | 17.2                    | 16.7       | 16.9       |
|                 |            | 8             | 7         | 24.0                    | 23.9       | 24.4       | 17.2                    | 16.7       | 16.9       |
|                 |            | 15            | 0         | 24.0                    | 24.0       | 24.4       | 17.2                    | 16.8       | 16.9       |
|                 | 16QAM      | 1             | 0         | 24.4                    | 24.3       | 24.7       | 17.5                    | 17.1       | 17.3       |
|                 |            | 1             | 7         | 24.4                    | 24.2       | 24.9       | 17.5                    | 17.1       | 17.3       |
|                 |            | 1             | 14        | 24.5                    | 24.2       | 24.8       | 17.6                    | 17.1       | 17.2       |
|                 |            | 8             | 0         | 23.0                    | 22.9       | 23.3       | 16.2                    | 15.7       | 15.9       |
|                 |            | 8             | 4         | 23.1                    | 22.9       | 23.4       | 16.2                    | 15.7       | 15.8       |
|                 |            | 8             | 7         | 23.1                    | 22.8       | 23.4       | 16.2                    | 15.7       | 15.9       |
|                 |            | 15            | 0         | 23.1                    | 22.8       | 23.4       | 16.2                    | 15.7       | 15.9       |
|                 | 64QAM      | 1             | 0         | 23.1                    | 23.0       | 23.4       | 16.3                    | 16.1       | 16.3       |
|                 |            | 1             | 7         | 23.1                    | 23.1       | 23.4       | 16.5                    | 16.2       | 16.4       |
|                 |            | 1             | 14        | 23.1                    | 22.9       | 23.4       | 16.3                    | 16.1       | 16.4       |
|                 |            | 8             | 0         | 21.7                    | 21.7       | 22.0       | 15.1                    | 14.9       | 15.2       |
|                 |            | 8             | 4         | 21.7                    | 21.7       | 22.1       | 15.1                    | 14.9       | 15.1       |
|                 |            | 8             | 7         | 21.7                    | 21.7       | 22.1       | 15.1                    | 14.9       | 15.1       |
|                 |            | 15            | 0         | 21.7                    | 21.7       | 22.0       | 15.1                    | 14.9       | 15.0       |

### OUTPUT POWER FOR LTE BAND 2 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 18625                   | 18900      | 19175      | 18625                   | 18900      | 19175      |
|                 |            |               |           | 1852.5 MHz              | 1880.0 MHz | 1907.5 MHz | 1852.5 MHz              | 1880.0 MHz | 1907.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.1                    | 25.2       | 25.4       | 18.5                    | 17.9       | 18.2       |
|                 |            | 1             | 12        | 25.2                    | 25.2       | 25.5       | 18.4                    | 17.8       | 18.1       |
|                 |            | 1             | 24        | 25.3                    | 25.2       | 25.7       | 18.3                    | 17.9       | 18.1       |
|                 |            | 12            | 0         | 24.1                    | 24.2       | 24.4       | 17.4                    | 16.8       | 17.2       |
|                 |            | 12            | 6         | 24.1                    | 24.2       | 24.4       | 17.3                    | 16.8       | 17.1       |
|                 |            | 12            | 11        | 24.2                    | 24.1       | 24.4       | 17.2                    | 16.9       | 17.1       |
|                 |            | 25            | 0         | 24.1                    | 24.1       | 24.4       | 17.3                    | 16.9       | 17.1       |
|                 | 16QAM      | 1             | 0         | 24.5                    | 24.5       | 24.8       | 17.7                    | 17.2       | 17.5       |
|                 |            | 1             | 12        | 24.5                    | 24.4       | 24.8       | 17.7                    | 17.1       | 17.5       |
|                 |            | 1             | 24        | 24.6                    | 24.4       | 25.0       | 17.5                    | 17.1       | 17.5       |
|                 |            | 12            | 0         | 23.1                    | 23.1       | 23.4       | 16.3                    | 15.9       | 16.2       |
|                 |            | 12            | 6         | 23.1                    | 23.1       | 23.5       | 16.3                    | 15.9       | 16.2       |
|                 |            | 12            | 11        | 23.2                    | 23.1       | 23.5       | 16.3                    | 15.9       | 16.1       |
|                 |            | 25            | 0         | 23.1                    | 23.0       | 23.4       | 16.3                    | 15.8       | 16.1       |
|                 | 64QAM      | 1             | 0         | 23.1                    | 23.1       | 23.5       | 16.4                    | 16.3       | 16.7       |
|                 |            | 1             | 12        | 23.1                    | 23.1       | 23.6       | 16.4                    | 16.3       | 16.6       |
|                 |            | 1             | 24        | 23.2                    | 23.1       | 23.7       | 16.5                    | 16.3       | 16.6       |
|                 |            | 12            | 0         | 21.9                    | 21.7       | 22.1       | 15.3                    | 15.0       | 15.2       |
|                 |            | 12            | 6         | 21.8                    | 21.8       | 22.1       | 15.3                    | 15.0       | 15.2       |
|                 |            | 12            | 11        | 21.9                    | 21.7       | 22.2       | 15.3                    | 15.0       | 15.1       |
|                 |            | 25            | 0         | 21.8                    | 21.8       | 22.1       | 15.2                    | 15.0       | 15.2       |

### OUTPUT POWER FOR LTE BAND 2 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 18650                   | 18900      | 19150      | 18650                   | 18900      | 19150      |
|                 |            |               |           | 1855.0 MHz              | 1880.0 MHz | 1905.0 MHz | 1855.0 MHz              | 1880.0 MHz | 1905.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 25.3                    | 25.2       | 25.4       | 18.5                    | 17.9       | 18.4       |
|                 |            | 1             | 24        | 25.4                    | 25.2       | 25.5       | 18.3                    | 17.9       | 18.3       |
|                 |            | 1             | 49        | 25.6                    | 25.3       | 25.7       | 18.2                    | 18.0       | 18.1       |
|                 |            | 25            | 0         | 24.3                    | 24.3       | 24.4       | 17.4                    | 17.0       | 17.3       |
|                 |            | 25            | 12        | 24.3                    | 24.3       | 24.5       | 17.3                    | 17.0       | 17.3       |
|                 |            | 25            | 24        | 24.5                    | 24.2       | 24.6       | 17.2                    | 17.0       | 17.2       |
|                 |            | 50            | 0         | 24.4                    | 24.2       | 24.5       | 17.3                    | 17.0       | 17.3       |
|                 | 16QAM      | 1             | 0         | 24.5                    | 24.6       | 24.6       | 17.7                    | 17.2       | 17.6       |
|                 |            | 1             | 24        | 24.6                    | 24.5       | 24.8       | 17.5                    | 17.2       | 17.6       |
|                 |            | 1             | 49        | 24.8                    | 24.5       | 25.0       | 17.5                    | 17.3       | 17.5       |
|                 |            | 25            | 0         | 23.3                    | 23.3       | 23.4       | 16.5                    | 16.1       | 16.4       |
|                 |            | 25            | 12        | 23.4                    | 23.3       | 23.5       | 16.4                    | 16.0       | 16.3       |
|                 |            | 25            | 24        | 23.6                    | 23.3       | 23.6       | 16.2                    | 16.1       | 16.3       |
|                 |            | 50            | 0         | 23.4                    | 23.3       | 23.5       | 16.3                    | 16.0       | 16.3       |
|                 | 64QAM      | 1             | 0         | 23.2                    | 23.1       | 23.2       | 16.5                    | 16.2       | 16.5       |
|                 |            | 1             | 24        | 23.1                    | 23.1       | 23.4       | 16.5                    | 16.3       | 16.5       |
|                 |            | 1             | 49        | 23.4                    | 23.3       | 23.6       | 16.7                    | 16.4       | 16.5       |
|                 |            | 25            | 0         | 22.0                    | 22.0       | 22.2       | 15.4                    | 15.2       | 15.5       |
|                 |            | 25            | 12        | 22.1                    | 22.0       | 22.3       | 15.4                    | 15.2       | 15.5       |
|                 |            | 25            | 24        | 22.2                    | 22.1       | 22.3       | 15.4                    | 15.3       | 15.4       |
|                 |            | 50            | 0         | 22.2                    | 22.1       | 22.3       | 15.4                    | 15.2       | 15.5       |

### OUTPUT POWER FOR LTE BAND 2 (15.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 18675                   | 18900      | 19125      | 18675                   | 18900      | 19125      |
|                 |            |               |           | 1857.5 MHz              | 1880.0 MHz | 1902.5 MHz | 1857.5 MHz              | 1880.0 MHz | 1902.5 MHz |
| 15.0            | QPSK       | 1             | 0         | 25.3                    | 25.3       | 25.4       | 18.4                    | 17.9       | 18.3       |
|                 |            | 1             | 37        | 25.5                    | 25.2       | 25.4       | 18.2                    | 17.9       | 18.3       |
|                 |            | 1             | 74        | 25.4                    | 25.3       | 25.7       | 18.0                    | 18.0       | 18.2       |
|                 |            | 36            | 0         | 24.4                    | 24.3       | 24.3       | 17.4                    | 17.0       | 17.4       |
|                 |            | 36            | 16        | 24.5                    | 24.3       | 24.4       | 17.2                    | 17.0       | 17.4       |
|                 |            | 36            | 35        | 24.5                    | 24.3       | 24.5       | 17.1                    | 17.0       | 17.3       |
|                 |            | 75            | 0         | 24.5                    | 24.2       | 24.5       | 17.2                    | 17.0       | 17.4       |
|                 | 16QAM      | 1             | 0         | 24.4                    | 24.7       | 24.7       | 17.5                    | 17.1       | 17.6       |
|                 |            | 1             | 37        | 24.7                    | 24.5       | 24.7       | 17.4                    | 17.2       | 17.6       |
|                 |            | 1             | 74        | 24.7                    | 24.6       | 25.0       | 17.3                    | 17.4       | 17.5       |
|                 |            | 36            | 0         | 23.4                    | 23.3       | 23.4       | 16.4                    | 16.1       | 16.5       |
|                 |            | 36            | 16        | 23.5                    | 23.3       | 23.4       | 16.3                    | 16.1       | 16.4       |
|                 |            | 36            | 35        | 23.5                    | 23.3       | 23.5       | 16.2                    | 16.0       | 16.3       |
|                 |            | 75            | 0         | 23.5                    | 23.3       | 23.4       | 16.3                    | 16.0       | 16.4       |
|                 | 64QAM      | 1             | 0         | 23.2                    | 23.2       | 23.2       | 16.6                    | 16.1       | 16.3       |
|                 |            | 1             | 37        | 23.4                    | 23.2       | 23.3       | 16.6                    | 16.3       | 16.5       |
|                 |            | 1             | 74        | 23.5                    | 23.3       | 23.6       | 16.6                    | 16.4       | 16.5       |
|                 |            | 36            | 0         | 22.1                    | 22.1       | 22.1       | 15.5                    | 15.2       | 15.4       |
|                 |            | 36            | 16        | 22.2                    | 22.1       | 22.2       | 15.4                    | 15.2       | 15.5       |
|                 |            | 36            | 35        | 22.3                    | 22.1       | 22.3       | 15.3                    | 15.3       | 15.5       |
|                 |            | 75            | 0         | 22.2                    | 22.0       | 22.2       | 15.3                    | 15.2       | 15.5       |

### OUTPUT POWER FOR LTE BAND 2 (20.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 18700                   | 18900      | 19100      | 18700                   | 18900      | 19100      |
|                 |            |               |           | 1860.0 MHz              | 1880.0 MHz | 1900.0 MHz | 1860.0 MHz              | 1880.0 MHz | 1900.0 MHz |
| 20.0            | QPSK       | 1             | 0         | 25.3                    | 25.3       | 25.4       | 18.5                    | 17.9       | 18.2       |
|                 |            | 1             | 49        | 25.4                    | 25.2       | 25.3       | 18.2                    | 17.9       | 18.3       |
|                 |            | 1             | 99        | 25.4                    | 25.4       | 25.7       | 17.9                    | 18.1       | 18.1       |
|                 |            | 50            | 0         | 24.4                    | 24.3       | 24.3       | 17.3                    | 17.0       | 17.4       |
|                 |            | 50            | 24        | 24.5                    | 24.2       | 24.4       | 17.1                    | 17.0       | 17.4       |
|                 |            | 50            | 49        | 24.4                    | 24.3       | 24.5       | 17.0                    | 17.0       | 17.3       |
|                 |            | 100           | 0         | 24.5                    | 24.2       | 24.4       | 17.1                    | 17.0       | 17.4       |
|                 | 16QAM      | 1             | 0         | 24.6                    | 24.7       | 24.9       | 17.8                    | 17.3       | 17.5       |
|                 |            | 1             | 49        | 24.8                    | 24.5       | 24.7       | 17.6                    | 17.2       | 17.6       |
|                 |            | 1             | 99        | 24.7                    | 24.7       | 25.1       | 17.2                    | 17.5       | 17.5       |
|                 |            | 50            | 0         | 23.4                    | 23.3       | 23.3       | 16.3                    | 16.1       | 16.4       |
|                 |            | 50            | 24        | 23.5                    | 23.2       | 23.4       | 16.2                    | 16.1       | 16.4       |
|                 |            | 50            | 49        | 23.5                    | 23.4       | 23.5       | 16.1                    | 16.1       | 16.3       |
|                 |            | 100           | 0         | 23.5                    | 23.3       | 23.4       | 16.2                    | 16.1       | 16.4       |
|                 | 64QAM      | 1             | 0         | 23.1                    | 23.4       | 23.5       | 16.5                    | 16.4       | 16.6       |
|                 |            | 1             | 49        | 23.3                    | 23.2       | 23.3       | 16.6                    | 16.4       | 16.6       |
|                 |            | 1             | 99        | 23.2                    | 23.5       | 23.8       | 16.1                    | 16.5       | 16.7       |
|                 |            | 50            | 0         | 22.1                    | 22.0       | 22.2       | 15.4                    | 15.1       | 15.3       |
|                 |            | 50            | 24        | 22.2                    | 22.0       | 22.1       | 15.3                    | 15.2       | 15.5       |
|                 |            | 50            | 49        | 22.2                    | 22.1       | 22.3       | 15.2                    | 15.2       | 15.5       |
|                 |            | 100           | 0         | 22.2                    | 22.0       | 22.2       | 15.3                    | 15.2       | 15.5       |

## 7.2. LTE BAND 5

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/18/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 5 (1.4 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 20407                   | 20525     | 20643     | 20407                   | 20525     | 20643     |
|                 |            |               |           | 824.7 MHz               | 836.5 MHz | 848.3 MHz | 824.7 MHz               | 836.5 MHz | 848.3 MHz |
| 1.4             | QPSK       | 1             | 0         | 25.2                    | 25.6      | 25.2      | 24.3                    | 24.1      | 24.0      |
|                 |            | 1             | 2         | 25.1                    | 25.5      | 25.2      | 24.3                    | 24.1      | 24.0      |
|                 |            | 1             | 5         | 25.2                    | 25.6      | 25.2      | 24.3                    | 24.1      | 24.1      |
|                 |            | 3             | 0         | 25.1                    | 25.5      | 25.1      | 24.2                    | 23.9      | 23.9      |
|                 |            | 3             | 1         | 25.0                    | 25.5      | 25.1      | 24.2                    | 23.9      | 23.9      |
|                 |            | 3             | 2         | 25.0                    | 25.4      | 25.0      | 24.2                    | 23.9      | 23.9      |
|                 | 16QAM      | 6             | 0         | 23.9                    | 24.4      | 24.0      | 23.1                    | 22.9      | 22.8      |
|                 |            | 1             | 0         | 24.5                    | 24.8      | 24.6      | 23.5                    | 23.3      | 23.4      |
|                 |            | 1             | 2         | 24.4                    | 24.8      | 24.5      | 23.5                    | 23.3      | 23.3      |
|                 |            | 1             | 5         | 24.4                    | 24.8      | 24.5      | 23.5                    | 23.4      | 23.3      |
|                 |            | 3             | 0         | 24.1                    | 24.5      | 24.1      | 23.3                    | 23.0      | 23.1      |
|                 |            | 3             | 1         | 24.1                    | 24.5      | 24.1      | 23.3                    | 23.0      | 23.0      |
|                 | 64QAM      | 3             | 2         | 24.1                    | 24.5      | 24.2      | 23.2                    | 23.0      | 23.0      |
|                 |            | 6             | 0         | 23.0                    | 23.3      | 22.9      | 22.1                    | 21.9      | 21.9      |
|                 |            | 1             | 0         | 23.6                    | 23.7      | 23.5      | 22.8                    | 22.3      | 22.3      |
|                 |            | 1             | 2         | 23.5                    | 23.7      | 23.5      | 22.7                    | 22.4      | 22.4      |
|                 |            | 1             | 5         | 23.6                    | 23.7      | 23.4      | 22.9                    | 22.4      | 22.3      |
|                 |            | 3             | 0         | 23.2                    | 23.4      | 23.3      | 22.5                    | 22.0      | 22.2      |
|                 |            | 3             | 1         | 23.2                    | 23.4      | 23.3      | 22.5                    | 22.0      | 22.1      |
|                 |            | 3             | 2         | 23.2                    | 23.4      | 23.3      | 22.5                    | 22.0      | 22.1      |
|                 |            | 6             | 0         | 22.1                    | 22.4      | 22.2      | 21.3                    | 21.0      | 21.0      |

### OUTPUT POWER FOR LTE BAND 5 (3.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 20415                   | 20525     | 20635     | 20415                   | 20525     | 20635     |
|                 |            |               |           | 825.5 MHz               | 836.5 MHz | 847.5 MHz | 825.5 MHz               | 836.5 MHz | 847.5 MHz |
| 3.0             | QPSK       | 1             | 0         | 25.2                    | 25.5      | 25.3      | 24.3                    | 24.0      | 24.0      |
|                 |            | 1             | 7         | 25.3                    | 25.6      | 25.3      | 24.4                    | 24.0      | 24.1      |
|                 |            | 1             | 14        | 25.3                    | 25.5      | 25.1      | 24.3                    | 24.0      | 24.0      |
|                 |            | 8             | 0         | 24.0                    | 24.4      | 24.1      | 23.1                    | 22.8      | 22.9      |
|                 |            | 8             | 4         | 24.0                    | 24.4      | 24.1      | 23.1                    | 22.8      | 22.9      |
|                 |            | 8             | 7         | 24.0                    | 24.4      | 24.1      | 23.1                    | 22.8      | 22.9      |
|                 | 16QAM      | 15            | 0         | 24.1                    | 24.5      | 24.1      | 23.2                    | 22.9      | 22.9      |
|                 |            | 1             | 0         | 24.5                    | 24.9      | 24.6      | 23.5                    | 23.3      | 23.2      |
|                 |            | 1             | 7         | 24.5                    | 24.8      | 24.5      | 23.5                    | 23.3      | 23.4      |
|                 |            | 1             | 14        | 24.5                    | 24.7      | 24.4      | 23.5                    | 23.3      | 23.3      |
|                 |            | 8             | 0         | 23.0                    | 23.4      | 23.1      | 22.2                    | 21.8      | 21.8      |
|                 |            | 8             | 4         | 23.0                    | 23.4      | 23.0      | 22.2                    | 21.9      | 21.8      |
|                 | 64QAM      | 8             | 7         | 23.0                    | 23.4      | 23.0      | 22.2                    | 21.9      | 21.8      |
|                 |            | 15            | 0         | 23.1                    | 23.4      | 23.0      | 22.2                    | 21.9      | 21.8      |
|                 |            | 1             | 0         | 23.5                    | 23.8      | 23.5      | 22.7                    | 22.2      | 22.4      |
|                 |            | 1             | 7         | 23.5                    | 23.7      | 23.6      | 22.7                    | 22.3      | 22.5      |
|                 |            | 1             | 14        | 23.6                    | 23.6      | 23.5      | 22.6                    | 22.2      | 22.3      |
|                 |            | 8             | 0         | 22.1                    | 22.4      | 22.1      | 21.3                    | 20.9      | 21.0      |
|                 |            | 8             | 4         | 22.1                    | 22.3      | 22.1      | 21.3                    | 20.9      | 21.0      |
|                 |            | 8             | 7         | 22.1                    | 22.3      | 22.1      | 21.3                    | 20.9      | 20.9      |
|                 |            | 15            | 0         | 22.1                    | 22.3      | 22.2      | 21.3                    | 20.9      | 21.0      |

### OUTPUT POWER FOR LTE BAND 5 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 20425                   | 20525     | 20625     | 20425                   | 20525     | 20625     |
|                 |            |               |           | 826.5 MHz               | 836.5 MHz | 846.5 MHz | 826.5 MHz               | 836.5 MHz | 846.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.2                    | 25.7      | 25.4      | 24.4                    | 24.2      | 24.1      |
|                 |            | 1             | 12        | 25.3                    | 25.6      | 25.3      | 24.4                    | 24.1      | 24.0      |
|                 |            | 1             | 24        | 25.4                    | 25.6      | 25.2      | 24.4                    | 24.2      | 24.0      |
|                 |            | 12            | 0         | 24.1                    | 24.6      | 24.3      | 23.2                    | 23.0      | 22.9      |
|                 |            | 12            | 6         | 24.2                    | 24.6      | 24.2      | 23.3                    | 23.0      | 22.9      |
|                 |            | 12            | 11        | 24.3                    | 24.6      | 24.2      | 23.3                    | 23.0      | 22.9      |
|                 |            | 25            | 0         | 24.3                    | 24.6      | 24.2      | 23.3                    | 23.0      | 22.9      |
|                 | 16QAM      | 1             | 0         | 24.6                    | 25.0      | 24.8      | 23.7                    | 23.6      | 23.5      |
|                 |            | 1             | 12        | 24.7                    | 24.9      | 24.7      | 23.7                    | 23.4      | 23.4      |
|                 |            | 1             | 24        | 24.9                    | 24.8      | 24.6      | 23.8                    | 23.4      | 23.5      |
|                 |            | 12            | 0         | 23.1                    | 23.5      | 23.2      | 22.2                    | 22.0      | 22.0      |
|                 |            | 12            | 6         | 23.1                    | 23.5      | 23.2      | 22.3                    | 22.0      | 22.0      |
|                 |            | 12            | 11        | 23.3                    | 23.5      | 23.2      | 22.3                    | 22.0      | 21.9      |
|                 |            | 25            | 0         | 23.2                    | 23.5      | 23.2      | 22.3                    | 22.0      | 21.9      |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.9      | 23.6      | 22.8                    | 22.5      | 22.5      |
|                 |            | 1             | 12        | 23.7                    | 23.8      | 23.6      | 22.8                    | 22.5      | 22.5      |
|                 |            | 1             | 24        | 23.8                    | 23.8      | 23.7      | 22.9                    | 22.4      | 22.4      |
|                 |            | 12            | 0         | 22.2                    | 22.5      | 22.2      | 21.4                    | 21.2      | 21.0      |
|                 |            | 12            | 6         | 22.2                    | 22.5      | 22.2      | 21.5                    | 21.1      | 21.1      |
|                 |            | 12            | 11        | 22.3                    | 22.5      | 22.3      | 21.5                    | 21.1      | 21.0      |
|                 |            | 25            | 0         | 22.3                    | 22.5      | 22.2      | 21.4                    | 21.1      | 21.1      |

### OUTPUT POWER FOR LTE BAND 5 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 20450                   | 20525     | 20600     | 20450                   | 20525     | 20600     |
|                 |            |               |           | 829.0 MHz               | 836.5 MHz | 844.0 MHz | 829.0 MHz               | 836.5 MHz | 844.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 25.3                    | 25.6      | 25.6      | 24.5                    | 24.4      | 24.2      |
|                 |            | 1             | 24        | 25.5                    | 25.6      | 25.4      | 24.5                    | 24.1      | 24.1      |
|                 |            | 1             | 49        | 25.7                    | 25.5      | 25.3      | 24.3                    | 24.2      | 24.2      |
|                 |            | 25            | 0         | 24.5                    | 24.6      | 24.4      | 23.4                    | 23.3      | 23.2      |
|                 |            | 25            | 12        | 24.5                    | 24.7      | 24.4      | 23.4                    | 23.1      | 23.1      |
|                 |            | 25            | 24        | 24.5                    | 24.6      | 24.4      | 23.4                    | 23.2      | 23.1      |
|                 |            | 50            | 0         | 24.5                    | 24.7      | 24.4      | 23.5                    | 23.2      | 23.1      |
|                 | 16QAM      | 1             | 0         | 24.5                    | 24.9      | 24.9      | 23.7                    | 23.9      | 23.5      |
|                 |            | 1             | 24        | 24.8                    | 24.9      | 24.8      | 23.7                    | 23.5      | 23.4      |
|                 |            | 1             | 49        | 24.9                    | 24.8      | 24.7      | 23.6                    | 23.5      | 23.4      |
|                 |            | 25            | 0         | 23.4                    | 23.7      | 23.4      | 22.5                    | 22.3      | 22.2      |
|                 |            | 25            | 12        | 23.6                    | 23.7      | 23.4      | 22.5                    | 22.2      | 22.1      |
|                 |            | 25            | 24        | 23.6                    | 23.6      | 23.4      | 22.4                    | 22.2      | 22.1      |
|                 |            | 50            | 0         | 23.6                    | 23.7      | 23.4      | 22.5                    | 22.2      | 22.1      |
|                 | 64QAM      | 1             | 0         | 23.4                    | 23.9      | 23.7      | 22.8                    | 22.8      | 22.5      |
|                 |            | 1             | 24        | 23.7                    | 23.8      | 23.6      | 22.8                    | 22.6      | 22.4      |
|                 |            | 1             | 49        | 24.0                    | 23.6      | 23.7      | 22.6                    | 22.6      | 22.4      |
|                 |            | 25            | 0         | 22.5                    | 22.7      | 22.4      | 21.6                    | 21.4      | 21.3      |
|                 |            | 25            | 12        | 22.6                    | 22.7      | 22.4      | 21.6                    | 21.3      | 21.3      |
|                 |            | 25            | 24        | 22.7                    | 22.6      | 22.4      | 21.6                    | 21.4      | 21.3      |
|                 |            | 50            | 0         | 22.6                    | 22.7      | 22.5      | 21.6                    | 21.4      | 21.3      |

### 7.3. LTE BAND 7

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/27/19 |
|-----|-------|-------|---------|

#### OUTPUT POWER FOR LTE BAND 7 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 20775                   | 21100      | 21425      | 20775                   | 21100      | 21425      |
|                 |            |               |           | 2502.5 MHz              | 2535.0 MHz | 2567.5 MHz | 2502.5 MHz              | 2535.0 MHz | 2567.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.4                    | 25.6       | 25.2       | 19.7                    | 19.2       | 19.2       |
|                 |            | 1             | 12        | 25.4                    | 25.6       | 25.2       | 19.6                    | 19.3       | 19.2       |
|                 |            | 1             | 24        | 25.3                    | 25.5       | 25.3       | 19.7                    | 19.3       | 19.2       |
|                 |            | 12            | 0         | 24.2                    | 24.5       | 24.2       | 18.5                    | 18.2       | 18.1       |
|                 |            | 12            | 6         | 24.2                    | 24.5       | 24.2       | 18.5                    | 18.2       | 18.1       |
|                 |            | 12            | 11        | 24.2                    | 24.5       | 24.2       | 18.5                    | 18.2       | 18.1       |
|                 |            | 25            | 0         | 24.3                    | 24.5       | 24.2       | 18.6                    | 18.2       | 18.1       |
|                 | 16QAM      | 1             | 0         | 24.8                    | 25.2       | 24.7       | 18.9                    | 18.7       | 18.6       |
|                 |            | 1             | 12        | 24.7                    | 25.0       | 24.7       | 18.9                    | 18.7       | 18.5       |
|                 |            | 1             | 24        | 24.7                    | 25.0       | 24.7       | 18.9                    | 18.8       | 18.6       |
|                 |            | 12            | 0         | 23.3                    | 23.5       | 23.1       | 17.6                    | 17.3       | 17.1       |
|                 |            | 12            | 6         | 23.3                    | 23.5       | 23.1       | 17.6                    | 17.3       | 17.1       |
|                 |            | 12            | 11        | 23.3                    | 23.5       | 23.1       | 17.6                    | 17.3       | 17.1       |
|                 |            | 25            | 0         | 23.2                    | 23.4       | 23.2       | 17.6                    | 17.3       | 17.1       |
|                 | 64QAM      | 1             | 0         | 23.7                    | 23.9       | 23.4       | 18.0                    | 17.8       | 17.4       |
|                 |            | 1             | 12        | 23.6                    | 23.8       | 23.4       | 17.9                    | 17.8       | 17.4       |
|                 |            | 1             | 24        | 23.6                    | 23.8       | 23.5       | 18.0                    | 17.9       | 17.5       |
|                 |            | 12            | 0         | 22.2                    | 22.3       | 22.0       | 16.5                    | 16.4       | 16.2       |
|                 |            | 12            | 6         | 22.2                    | 22.2       | 22.0       | 16.5                    | 16.4       | 16.1       |
|                 |            | 12            | 11        | 22.2                    | 22.3       | 22.0       | 16.4                    | 16.4       | 16.2       |
|                 |            | 25            | 0         | 22.2                    | 22.3       | 22.0       | 16.5                    | 16.4       | 16.1       |

#### OUTPUT POWER FOR LTE BAND 7 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 20800                   | 21100      | 21400      | 20800                   | 21100      | 21400      |
|                 |            |               |           | 2505.0 MHz              | 2535.0 MHz | 2565.0 MHz | 2505.0 MHz              | 2535.0 MHz | 2565.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 25.4                    | 25.7       | 25.4       | 19.7                    | 19.4       | 19.3       |
|                 |            | 1             | 24        | 25.4                    | 25.6       | 25.3       | 19.6                    | 19.4       | 19.3       |
|                 |            | 1             | 49        | 25.3                    | 25.5       | 25.4       | 19.6                    | 19.4       | 19.3       |
|                 |            | 25            | 0         | 24.4                    | 24.7       | 24.3       | 18.7                    | 18.4       | 18.3       |
|                 |            | 25            | 12        | 24.3                    | 24.6       | 24.3       | 18.7                    | 18.4       | 18.3       |
|                 |            | 25            | 24        | 24.3                    | 24.5       | 24.3       | 18.7                    | 18.5       | 18.4       |
|                 |            | 50            | 0         | 24.4                    | 24.6       | 24.2       | 18.7                    | 18.4       | 18.3       |
|                 | 16QAM      | 1             | 0         | 24.8                    | 25.1       | 24.9       | 19.1                    | 18.8       | 18.6       |
|                 |            | 1             | 24        | 24.7                    | 25.0       | 24.8       | 18.9                    | 18.8       | 18.6       |
|                 |            | 1             | 49        | 24.7                    | 24.9       | 24.8       | 18.9                    | 18.8       | 18.6       |
|                 |            | 25            | 0         | 23.5                    | 23.7       | 23.3       | 17.7                    | 17.4       | 17.5       |
|                 |            | 25            | 12        | 23.4                    | 23.7       | 23.3       | 17.7                    | 17.5       | 17.5       |
|                 |            | 25            | 24        | 23.4                    | 23.6       | 23.4       | 17.7                    | 17.5       | 17.4       |
|                 |            | 50            | 0         | 23.4                    | 23.6       | 23.4       | 17.7                    | 17.4       | 17.4       |
|                 | 64QAM      | 1             | 0         | 23.7                    | 23.9       | 23.6       | 17.8                    | 17.8       | 17.4       |
|                 |            | 1             | 24        | 23.6                    | 23.7       | 23.4       | 17.7                    | 17.8       | 17.4       |
|                 |            | 1             | 49        | 23.6                    | 23.7       | 23.5       | 17.8                    | 17.8       | 17.5       |
|                 |            | 25            | 0         | 22.5                    | 22.6       | 22.1       | 16.7                    | 16.6       | 16.3       |
|                 |            | 25            | 12        | 22.4                    | 22.5       | 22.2       | 16.6                    | 16.6       | 16.2       |
|                 |            | 25            | 24        | 22.4                    | 22.5       | 22.2       | 16.7                    | 16.7       | 16.2       |
|                 |            | 50            | 0         | 22.4                    | 22.5       | 22.2       | 16.6                    | 16.6       | 16.3       |

### OUTPUT POWER FOR LTE BAND 7 (15.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 20825                   | 21100      | 21375      | 20825                   | 21100      | 21375      |
|                 |            |               |           | 2507.5 MHz              | 2535.0 MHz | 2562.5 MHz | 2507.5 MHz              | 2535.0 MHz | 2562.5 MHz |
| 15.0            | QPSK       | 1             | 0         | 25.4                    | 25.7       | 25.4       | 19.7                    | 19.5       | 19.3       |
|                 |            | 1             | 37        | 25.4                    | 25.6       | 25.2       | 19.7                    | 19.5       | 19.4       |
|                 |            | 1             | 74        | 25.4                    | 25.4       | 25.3       | 19.6                    | 19.5       | 19.3       |
|                 |            | 36            | 0         | 24.4                    | 24.6       | 24.3       | 18.7                    | 18.4       | 18.3       |
|                 |            | 36            | 16        | 24.3                    | 24.6       | 24.2       | 18.7                    | 18.4       | 18.4       |
|                 |            | 36            | 35        | 24.3                    | 24.5       | 24.2       | 18.7                    | 18.5       | 18.3       |
|                 |            | 75            | 0         | 24.3                    | 24.6       | 24.2       | 18.7                    | 18.4       | 18.4       |
|                 | 16QAM      | 1             | 0         | 24.8                    | 25.1       | 24.8       | 19.1                    | 18.9       | 18.7       |
|                 |            | 1             | 37        | 24.7                    | 25.1       | 24.7       | 19.1                    | 18.8       | 18.7       |
|                 |            | 1             | 74        | 24.7                    | 24.8       | 24.7       | 19.0                    | 18.7       | 18.6       |
|                 |            | 36            | 0         | 23.5                    | 23.7       | 23.4       | 17.8                    | 17.5       | 17.4       |
|                 |            | 36            | 16        | 23.4                    | 23.7       | 23.3       | 17.9                    | 17.6       | 17.5       |
|                 |            | 36            | 35        | 23.3                    | 23.6       | 23.3       | 17.8                    | 17.6       | 17.5       |
|                 |            | 75            | 0         | 23.3                    | 23.6       | 23.3       | 17.8                    | 17.5       | 17.5       |
|                 | 64QAM      | 1             | 0         | 23.7                    | 23.9       | 23.7       | 17.9                    | 17.6       | 17.6       |
|                 |            | 1             | 37        | 23.5                    | 23.7       | 23.5       | 17.9                    | 17.6       | 17.5       |
|                 |            | 1             | 74        | 23.7                    | 23.6       | 23.5       | 17.9                    | 17.6       | 17.5       |
|                 |            | 36            | 0         | 22.4                    | 22.5       | 22.3       | 16.7                    | 16.5       | 16.3       |
|                 |            | 36            | 16        | 22.4                    | 22.4       | 22.2       | 16.7                    | 16.6       | 16.3       |
|                 |            | 36            | 35        | 22.4                    | 22.5       | 22.2       | 16.7                    | 16.6       | 16.3       |
|                 |            | 75            | 0         | 22.3                    | 22.4       | 22.1       | 16.6                    | 16.5       | 16.3       |

### OUTPUT POWER FOR LTE BAND 7 (20.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | 2                       |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 20850                   | 21100      | 21350      | 20850                   | 21100      | 21350      |
|                 |            |               |           | 2510.0 MHz              | 2535.0 MHz | 2560.0 MHz | 2510.0 MHz              | 2535.0 MHz | 2560.0 MHz |
| 20.0            | QPSK       | 1             | 0         | 25.4                    | 25.6       | 25.3       | 19.7                    | 19.4       | 19.4       |
|                 |            | 1             | 49        | 25.3                    | 25.6       | 25.3       | 19.6                    | 19.4       | 19.3       |
|                 |            | 1             | 99        | 25.7                    | 25.4       | 25.3       | 19.5                    | 19.4       | 19.3       |
|                 |            | 50            | 0         | 24.3                    | 24.7       | 24.3       | 18.7                    | 18.4       | 18.3       |
|                 |            | 50            | 24        | 24.3                    | 24.6       | 24.3       | 18.7                    | 18.5       | 18.3       |
|                 |            | 50            | 49        | 24.4                    | 24.5       | 24.2       | 18.6                    | 18.5       | 18.3       |
|                 |            | 100           | 0         | 24.3                    | 24.6       | 24.3       | 18.7                    | 18.5       | 18.3       |
|                 | 16QAM      | 1             | 0         | 24.8                    | 25.2       | 24.7       | 19.2                    | 18.8       | 18.8       |
|                 |            | 1             | 49        | 24.7                    | 25.1       | 24.8       | 19.0                    | 18.8       | 18.7       |
|                 |            | 1             | 99        | 25.1                    | 24.9       | 24.7       | 19.0                    | 18.7       | 18.6       |
|                 |            | 50            | 0         | 23.4                    | 23.7       | 23.4       | 17.8                    | 17.5       | 17.4       |
|                 |            | 50            | 24        | 23.4                    | 23.7       | 23.4       | 17.8                    | 17.5       | 17.5       |
|                 |            | 50            | 49        | 23.5                    | 23.6       | 23.3       | 17.7                    | 17.6       | 17.5       |
|                 |            | 100           | 0         | 23.3                    | 23.6       | 23.3       | 17.7                    | 17.5       | 17.4       |
|                 | 64QAM      | 1             | 0         | 23.6                    | 24.0       | 23.8       | 17.8                    | 17.9       | 17.7       |
|                 |            | 1             | 49        | 23.5                    | 23.9       | 23.7       | 17.6                    | 17.8       | 17.5       |
|                 |            | 1             | 99        | 23.8                    | 23.8       | 23.7       | 17.6                    | 17.8       | 17.6       |
|                 |            | 50            | 0         | 22.3                    | 22.6       | 22.4       | 16.6                    | 16.5       | 16.3       |
|                 |            | 50            | 24        | 22.3                    | 22.4       | 22.3       | 16.6                    | 16.6       | 16.3       |
|                 |            | 50            | 49        | 22.4                    | 22.4       | 22.1       | 16.6                    | 16.5       | 16.3       |
|                 |            | 100           | 0         | 22.3                    | 22.4       | 22.2       | 16.6                    | 16.5       | 16.2       |

## 7.4. LTE BAND 12

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/18/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 12 (1.4 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 23017                   | 23095     | 23173     | 23017                   | 23095     | 23173     |
|                 |            |               |           | 699.7 MHz               | 707.5 MHz | 715.3 MHz | 699.7 MHz               | 707.5 MHz | 715.3 MHz |
| 1.4             | QPSK       | 1             | 0         | 25.5                    | 25.4      | 25.5      | 24.2                    | 24.2      | 24.4      |
|                 |            | 1             | 2         | 25.4                    | 25.3      | 25.6      | 24.1                    | 24.2      | 24.3      |
|                 |            | 1             | 5         | 25.4                    | 25.4      | 25.6      | 24.1                    | 24.1      | 24.3      |
|                 |            | 3             | 0         | 25.3                    | 25.2      | 25.3      | 24.0                    | 24.0      | 24.1      |
|                 |            | 3             | 1         | 25.3                    | 25.1      | 25.4      | 24.0                    | 24.0      | 24.1      |
|                 |            | 3             | 2         | 25.3                    | 25.1      | 25.4      | 24.1                    | 24.0      | 24.1      |
|                 |            | 6             | 0         | 24.2                    | 24.1      | 24.3      | 22.9                    | 23.0      | 23.0      |
|                 | 16QAM      | 1             | 0         | 24.6                    | 24.6      | 24.8      | 23.4                    | 23.6      | 23.7      |
|                 |            | 1             | 2         | 24.6                    | 24.7      | 24.8      | 23.3                    | 23.5      | 23.5      |
|                 |            | 1             | 5         | 24.6                    | 24.7      | 24.9      | 23.4                    | 23.5      | 23.5      |
|                 |            | 3             | 0         | 24.3                    | 24.3      | 24.5      | 23.1                    | 23.2      | 23.2      |
|                 |            | 3             | 1         | 24.4                    | 24.3      | 24.5      | 23.0                    | 23.1      | 23.2      |
|                 |            | 3             | 2         | 24.3                    | 24.3      | 24.5      | 23.1                    | 23.1      | 23.2      |
|                 |            | 6             | 0         | 23.2                    | 23.1      | 23.4      | 21.9                    | 21.9      | 22.2      |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.7      | 23.6      | 22.6                    | 22.3      | 22.6      |
|                 |            | 1             | 2         | 23.6                    | 23.6      | 23.6      | 22.5                    | 22.2      | 22.5      |
|                 |            | 1             | 5         | 23.5                    | 23.6      | 23.8      | 22.4                    | 22.2      | 22.3      |
|                 |            | 3             | 0         | 23.2                    | 23.2      | 23.4      | 22.1                    | 22.0      | 22.1      |
|                 |            | 3             | 1         | 23.2                    | 23.2      | 23.4      | 22.1                    | 22.0      | 22.1      |
|                 |            | 3             | 2         | 23.2                    | 23.2      | 23.4      | 22.1                    | 22.0      | 22.1      |
|                 |            | 6             | 0         | 22.0                    | 22.2      | 22.3      | 20.9                    | 20.9      | 20.8      |

### OUTPUT POWER FOR LTE BAND 12 (3.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 23025                   | 23095     | 23165     | 23025                   | 23095     | 23165     |
|                 |            |               |           | 700.5 MHz               | 707.5 MHz | 714.5 MHz | 700.5 MHz               | 707.5 MHz | 714.5 MHz |
| 3.0             | QPSK       | 1             | 0         | 25.4                    | 25.3      | 25.3      | 24.1                    | 24.1      | 24.4      |
|                 |            | 1             | 7         | 25.4                    | 25.4      | 25.5      | 24.2                    | 24.2      | 24.5      |
|                 |            | 1             | 14        | 25.2                    | 25.3      | 25.5      | 24.1                    | 24.1      | 24.3      |
|                 |            | 8             | 0         | 24.2                    | 24.1      | 24.1      | 23.0                    | 22.9      | 23.3      |
|                 |            | 8             | 4         | 24.2                    | 24.1      | 24.2      | 22.9                    | 23.0      | 23.2      |
|                 |            | 8             | 7         | 24.2                    | 24.1      | 24.3      | 22.9                    | 22.9      | 23.2      |
|                 |            | 15            | 0         | 24.2                    | 24.2      | 24.4      | 23.0                    | 23.0      | 23.3      |
|                 | 16QAM      | 1             | 0         | 24.7                    | 24.5      | 24.5      | 23.3                    | 23.4      | 23.7      |
|                 |            | 1             | 7         | 24.6                    | 24.7      | 24.7      | 23.4                    | 23.5      | 23.8      |
|                 |            | 1             | 14        | 24.4                    | 24.6      | 24.8      | 23.4                    | 23.3      | 23.6      |
|                 |            | 8             | 0         | 23.2                    | 23.1      | 23.1      | 22.0                    | 21.9      | 22.2      |
|                 |            | 8             | 4         | 23.2                    | 23.1      | 23.1      | 21.9                    | 22.0      | 22.2      |
|                 |            | 8             | 7         | 23.2                    | 23.1      | 23.2      | 21.9                    | 21.9      | 22.2      |
|                 |            | 15            | 0         | 23.2                    | 23.1      | 23.3      | 21.9                    | 22.0      | 22.3      |
|                 | 64QAM      | 1             | 0         | 23.3                    | 23.4      | 23.4      | 22.2                    | 22.3      | 22.5      |
|                 |            | 1             | 7         | 23.3                    | 23.6      | 23.7      | 22.2                    | 22.1      | 22.4      |
|                 |            | 1             | 14        | 23.2                    | 23.5      | 23.7      | 22.4                    | 22.2      | 22.3      |
|                 |            | 8             | 0         | 21.9                    | 22.1      | 22.1      | 20.9                    | 20.8      | 21.1      |
|                 |            | 8             | 4         | 21.9                    | 22.1      | 22.1      | 20.8                    | 20.8      | 20.9      |
|                 |            | 8             | 7         | 21.9                    | 22.1      | 22.2      | 20.9                    | 20.8      | 20.9      |
|                 |            | 15            | 0         | 21.9                    | 22.2      | 22.2      | 20.8                    | 20.8      | 20.9      |

### OUTPUT POWER FOR LTE BAND 12 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 23035                   | 23095     | 23155     | 23035                   | 23095     | 23155     |
|                 |            |               |           | 701.5 MHz               | 707.5 MHz | 713.5 MHz | 701.5 MHz               | 707.5 MHz | 713.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.4                    | 25.3      | 25.3      | 24.2                    | 24.2      | 24.4      |
|                 |            | 1             | 12        | 25.3                    | 25.4      | 25.3      | 24.2                    | 24.1      | 24.4      |
|                 |            | 1             | 24        | 25.4                    | 25.4      | 25.6      | 24.2                    | 24.2      | 24.3      |
|                 |            | 12            | 0         | 24.3                    | 24.3      | 24.2      | 23.1                    | 23.0      | 23.3      |
|                 |            | 12            | 6         | 24.2                    | 24.3      | 24.2      | 23.1                    | 23.0      | 23.3      |
|                 |            | 12            | 11        | 24.2                    | 24.3      | 24.3      | 23.1                    | 23.1      | 23.3      |
|                 |            | 25            | 0         | 24.3                    | 24.3      | 24.3      | 23.1                    | 23.1      | 23.3      |
|                 | 16QAM      | 1             | 0         | 24.8                    | 24.6      | 24.7      | 23.6                    | 23.5      | 23.7      |
|                 |            | 1             | 12        | 24.7                    | 24.7      | 24.7      | 23.5                    | 23.4      | 23.8      |
|                 |            | 1             | 24        | 24.8                    | 24.7      | 25.0      | 23.6                    | 23.5      | 23.8      |
|                 |            | 12            | 0         | 23.3                    | 23.2      | 23.2      | 22.1                    | 22.1      | 22.3      |
|                 |            | 12            | 6         | 23.2                    | 23.3      | 23.3      | 22.1                    | 22.1      | 22.3      |
|                 |            | 12            | 11        | 23.1                    | 23.2      | 23.3      | 22.1                    | 22.1      | 22.3      |
|                 |            | 25            | 0         | 23.2                    | 23.2      | 23.3      | 22.1                    | 22.0      | 22.3      |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.6      | 23.6      | 22.5                    | 22.4      | 22.6      |
|                 |            | 1             | 12        | 23.6                    | 23.7      | 23.5      | 22.5                    | 22.3      | 22.6      |
|                 |            | 1             | 24        | 23.6                    | 23.6      | 23.9      | 22.6                    | 22.4      | 22.4      |
|                 |            | 12            | 0         | 22.1                    | 22.3      | 22.0      | 21.0                    | 21.0      | 21.2      |
|                 |            | 12            | 6         | 22.2                    | 22.3      | 22.1      | 21.1                    | 21.0      | 21.2      |
|                 |            | 12            | 11        | 22.2                    | 22.3      | 22.3      | 21.1                    | 21.0      | 21.0      |
|                 |            | 25            | 0         | 22.2                    | 22.3      | 22.2      | 21.1                    | 21.0      | 21.2      |
|                 |            | 25            | 0         | 22.2                    | 22.3      | 22.2      | 21.1                    | 21.0      | 21.2      |

### OUTPUT POWER FOR LTE BAND 12 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 23060                   | 23095     | 23130     | 23060                   | 23095     | 23130     |
|                 |            |               |           | 704.0 MHz               | 707.5 MHz | 711.0 MHz | 704.0 MHz               | 707.5 MHz | 711.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 25.5                    | 25.4      | 25.4      | 24.3                    | 24.2      | 24.2      |
|                 |            | 1             | 24        | 25.4                    | 25.4      | 25.4      | 24.2                    | 24.2      | 24.4      |
|                 |            | 1             | 49        | 25.4                    | 25.4      | 25.7      | 24.3                    | 24.5      | 24.5      |
|                 |            | 25            | 0         | 24.3                    | 24.3      | 24.3      | 23.2                    | 23.2      | 23.2      |
|                 |            | 25            | 12        | 24.4                    | 24.3      | 24.4      | 23.1                    | 23.2      | 23.3      |
|                 |            | 25            | 24        | 24.4                    | 24.3      | 24.4      | 23.2                    | 23.2      | 23.4      |
|                 |            | 50            | 0         | 24.4                    | 24.3      | 24.3      | 23.1                    | 23.2      | 23.4      |
|                 | 16QAM      | 1             | 0         | 24.8                    | 24.7      | 24.8      | 23.5                    | 23.6      | 23.7      |
|                 |            | 1             | 24        | 24.6                    | 24.7      | 24.7      | 23.5                    | 23.6      | 23.7      |
|                 |            | 1             | 49        | 24.8                    | 24.8      | 25.0      | 23.5                    | 23.8      | 23.8      |
|                 |            | 25            | 0         | 23.4                    | 23.3      | 23.4      | 22.2                    | 22.2      | 22.2      |
|                 |            | 25            | 12        | 23.4                    | 23.4      | 23.4      | 22.2                    | 22.2      | 22.3      |
|                 |            | 25            | 24        | 23.4                    | 23.4      | 23.4      | 22.2                    | 22.2      | 22.5      |
|                 |            | 50            | 0         | 23.4                    | 23.3      | 23.3      | 22.2                    | 22.2      | 22.4      |
|                 | 64QAM      | 1             | 0         | 23.5                    | 23.4      | 23.8      | 22.5                    | 22.4      | 22.5      |
|                 |            | 1             | 24        | 23.5                    | 23.7      | 23.5      | 22.5                    | 22.4      | 22.5      |
|                 |            | 1             | 49        | 23.8                    | 23.6      | 23.9      | 22.3                    | 22.7      | 22.5      |
|                 |            | 25            | 0         | 22.4                    | 22.4      | 22.4      | 21.3                    | 21.2      | 21.2      |
|                 |            | 25            | 12        | 22.3                    | 22.5      | 22.3      | 21.1                    | 21.2      | 21.4      |
|                 |            | 25            | 24        | 22.4                    | 22.4      | 22.4      | 21.2                    | 21.3      | 21.4      |
|                 |            | 50            | 0         | 22.4                    | 22.4      | 22.3      | 21.2                    | 21.2      | 21.3      |
|                 |            | 50            | 0         | 22.4                    | 22.4      | 22.3      | 21.2                    | 21.2      | 21.3      |

## 7.5. LTE BAND 13

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/27/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 13 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 23207                   | 23230     | 23255     | 23207                   | 23230     | 23255     |
|                 |            |               |           | 779.5 MHz               | 782.0 MHz | 784.5 MHz | 779.5 MHz               | 782.0 MHz | 784.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.6                    | 25.5      | 25.2      | 24.4                    | 24.4      | 24.4      |
|                 |            | 1             | 12        | 25.5                    | 25.2      | 25.2      | 24.3                    | 24.3      | 24.3      |
|                 |            | 1             | 24        | 25.3                    | 25.3      | 25.3      | 24.3                    | 24.3      | 24.2      |
|                 |            | 12            | 0         | 24.5                    | 24.2      | 24.1      | 23.2                    | 23.2      | 23.2      |
|                 |            | 12            | 6         | 24.4                    | 24.1      | 24.2      | 23.2                    | 23.2      | 23.2      |
|                 |            | 12            | 11        | 24.3                    | 24.1      | 24.2      | 23.2                    | 23.2      | 23.2      |
|                 |            | 25            | 0         | 24.4                    | 24.2      | 24.2      | 23.3                    | 23.3      | 23.2      |
|                 | 16QAM      | 1             | 0         | 24.8                    | 24.9      | 24.6      | 23.6                    | 23.7      | 23.7      |
|                 |            | 1             | 12        | 24.7                    | 24.6      | 24.6      | 23.5                    | 23.7      | 23.6      |
|                 |            | 1             | 24        | 24.6                    | 24.7      | 24.7      | 23.6                    | 23.6      | 23.6      |
|                 |            | 12            | 0         | 23.4                    | 23.3      | 23.0      | 22.2                    | 22.2      | 22.2      |
|                 |            | 12            | 6         | 23.3                    | 23.2      | 23.2      | 22.2                    | 22.3      | 22.2      |
|                 |            | 12            | 11        | 23.3                    | 23.2      | 23.2      | 22.1                    | 22.2      | 22.1      |
|                 |            | 25            | 0         | 23.3                    | 23.1      | 23.2      | 22.2                    | 22.2      | 22.2      |
|                 | 64QAM      | 1             | 0         | 23.2                    | 23.3      | 23.2      | 22.6                    | 22.6      | 22.5      |
|                 |            | 1             | 12        | 23.3                    | 23.3      | 23.1      | 22.5                    | 22.7      | 22.5      |
|                 |            | 1             | 24        | 23.2                    | 23.2      | 23.2      | 22.7                    | 22.7      | 22.5      |
|                 |            | 12            | 0         | 21.8                    | 21.8      | 21.8      | 21.1                    | 21.2      | 21.1      |
|                 |            | 12            | 6         | 21.8                    | 21.8      | 21.9      | 20.9                    | 21.2      | 21.2      |
|                 |            | 12            | 11        | 21.8                    | 21.8      | 21.9      | 21.1                    | 21.2      | 21.1      |
|                 |            | 25            | 0         | 21.9                    | 21.8      | 21.9      | 21.2                    | 21.2      | 21.1      |

### OUTPUT POWER FOR LTE BAND 13 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |     | Ant 2                   |           |     |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----|-------------------------|-----------|-----|
|                 |            |               |           | Conducted Average (dBm) |           |     | Conducted Average (dBm) |           |     |
|                 |            |               |           | N/A                     | 23230     | N/A | N/A                     | 23230     | N/A |
|                 |            |               |           | N/A                     | 782.0 MHz | N/A | N/A                     | 782.0 MHz | N/A |
| 10.0            | QPSK       | 1             | 0         |                         | 25.7      |     |                         | 24.5      |     |
|                 |            | 1             | 24        |                         | 25.3      |     |                         | 24.3      |     |
|                 |            | 1             | 49        |                         | 25.4      |     |                         | 24.3      |     |
|                 |            | 25            | 0         |                         | 24.5      |     |                         | 23.3      |     |
|                 |            | 25            | 12        |                         | 24.3      |     |                         | 23.3      |     |
|                 |            | 25            | 24        |                         | 24.3      |     |                         | 23.3      |     |
|                 |            | 50            | 0         |                         | 24.4      |     |                         | 23.4      |     |
|                 | 16QAM      | 1             | 0         |                         | 24.9      |     |                         | 23.7      |     |
|                 |            | 1             | 24        |                         | 24.6      |     |                         | 23.7      |     |
|                 |            | 1             | 49        |                         | 24.7      |     |                         | 23.6      |     |
|                 |            | 25            | 0         |                         | 23.4      |     |                         | 22.3      |     |
|                 |            | 25            | 12        |                         | 23.3      |     |                         | 22.3      |     |
|                 |            | 25            | 24        |                         | 23.3      |     |                         | 22.3      |     |
|                 |            | 50            | 0         |                         | 23.4      |     |                         | 22.3      |     |
|                 | 64QAM      | 1             | 0         |                         | 23.3      |     |                         | 22.6      |     |
|                 |            | 1             | 24        |                         | 23.2      |     |                         | 22.6      |     |
|                 |            | 1             | 49        |                         | 23.4      |     |                         | 22.6      |     |
|                 |            | 25            | 0         |                         | 22.0      |     |                         | 21.2      |     |
|                 |            | 25            | 12        |                         | 22.0      |     |                         | 21.4      |     |
|                 |            | 25            | 24        |                         | 22.1      |     |                         | 21.4      |     |
|                 |            | 50            | 0         |                         | 22.1      |     |                         | 21.3      |     |

## 7.6. LTE BAND 14

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/27/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 14 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 23305                   | 23330     | 23355     | 23305                   | 23330     | 23355     |
|                 |            |               |           | 790.5 MHz               | 793.0 MHz | 795.5 MHz | 790.5 MHz               | 793.0 MHz | 795.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.6                    | 25.6      | 25.6      | 24.2                    | 24.1      | 24.3      |
|                 |            | 1             | 12        | 25.6                    | 25.6      | 25.6      | 24.2                    | 24.2      | 24.3      |
|                 |            | 1             | 24        | 25.6                    | 25.7      | 25.6      | 24.2                    | 24.4      | 24.3      |
|                 |            | 12            | 0         | 24.5                    | 24.5      | 24.4      | 23.0                    | 23.0      | 23.1      |
|                 |            | 12            | 6         | 24.5                    | 24.5      | 24.5      | 23.1                    | 23.1      | 23.2      |
|                 |            | 12            | 11        | 24.5                    | 24.5      | 24.5      | 23.0                    | 23.1      | 23.3      |
|                 |            | 25            | 0         | 24.5                    | 24.5      | 24.5      | 23.1                    | 23.2      | 23.3      |
|                 | 16QAM      | 1             | 0         | 24.9                    | 25.0      | 25.0      | 23.5                    | 23.6      | 23.6      |
|                 |            | 1             | 12        | 24.9                    | 25.0      | 25.0      | 23.5                    | 23.7      | 23.7      |
|                 |            | 1             | 24        | 24.8                    | 25.1      | 25.0      | 23.5                    | 23.8      | 23.8      |
|                 |            | 12            | 0         | 23.5                    | 23.5      | 23.4      | 22.0                    | 22.0      | 22.2      |
|                 |            | 12            | 6         | 23.4                    | 23.5      | 23.5      | 22.0                    | 22.1      | 22.3      |
|                 |            | 12            | 11        | 23.4                    | 23.5      | 23.5      | 22.0                    | 22.2      | 22.3      |
|                 |            | 25            | 0         | 23.4                    | 23.5      | 23.5      | 22.0                    | 22.2      | 22.3      |
|                 | 64QAM      | 1             | 0         | 23.2                    | 23.3      | 23.3      | 22.5                    | 22.7      | 22.6      |
|                 |            | 1             | 12        | 23.3                    | 23.4      | 23.2      | 22.5                    | 22.7      | 22.7      |
|                 |            | 1             | 24        | 23.3                    | 23.3      | 23.3      | 22.6                    | 22.9      | 22.6      |
|                 |            | 12            | 0         | 21.9                    | 21.9      | 21.9      | 21.1                    | 21.1      | 21.3      |
|                 |            | 12            | 6         | 21.9                    | 21.8      | 21.9      | 21.1                    | 21.2      | 21.3      |
|                 |            | 12            | 11        | 21.9                    | 21.8      | 21.9      | 21.0                    | 21.2      | 21.3      |
|                 |            | 25            | 0         | 21.9                    | 21.9      | 21.9      | 21.1                    | 21.2      | 21.3      |

### OUTPUT POWER FOR LTE BAND 14 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |     | Ant 2                   |           |     |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----|-------------------------|-----------|-----|
|                 |            |               |           | Conducted Average (dBm) |           |     | Conducted Average (dBm) |           |     |
|                 |            |               |           | N/A                     | 23330     | N/A | N/A                     | 23330     | N/A |
|                 |            |               |           | N/A                     | 793.0 MHz | N/A | N/A                     | 793.0 MHz | N/A |
| 10.0            | QPSK       | 1             | 0         |                         | 25.7      |     |                         | 24.2      |     |
|                 |            | 1             | 24        |                         | 25.6      |     |                         | 24.3      |     |
|                 |            | 1             | 49        |                         | 25.7      |     |                         | 24.5      |     |
|                 |            | 25            | 0         |                         | 24.6      |     |                         | 23.2      |     |
|                 |            | 25            | 12        |                         | 24.6      |     |                         | 23.3      |     |
|                 |            | 25            | 24        |                         | 24.7      |     |                         | 23.4      |     |
|                 |            | 50            | 0         |                         | 24.6      |     |                         | 23.4      |     |
|                 | 16QAM      | 1             | 0         |                         | 25.0      |     |                         | 23.5      |     |
|                 |            | 1             | 24        |                         | 25.0      |     |                         | 23.6      |     |
|                 |            | 1             | 49        |                         | 25.1      |     |                         | 23.9      |     |
|                 |            | 25            | 0         |                         | 23.7      |     |                         | 22.2      |     |
|                 |            | 25            | 12        |                         | 23.6      |     |                         | 22.3      |     |
|                 |            | 25            | 24        |                         | 23.7      |     |                         | 22.4      |     |
|                 |            | 50            | 0         |                         | 23.7      |     |                         | 22.4      |     |
|                 | 64QAM      | 1             | 0         |                         | 23.3      |     |                         | 22.5      |     |
|                 |            | 1             | 24        |                         | 23.3      |     |                         | 22.7      |     |
|                 |            | 1             | 49        |                         | 23.3      |     |                         | 22.8      |     |
|                 |            | 25            | 0         |                         | 22.0      |     |                         | 21.2      |     |
|                 |            | 25            | 12        |                         | 22.0      |     |                         | 21.3      |     |
|                 |            | 25            | 24        |                         | 22.0      |     |                         | 21.5      |     |
|                 |            | 50            | 0         |                         | 22.0      |     |                         | 21.4      |     |

## 7.7. LTE BAND 17

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/18/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 17 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 23755                   | 23790     | 23825     | 23755                   | 23790     | 23825     |
|                 |            |               |           | 706.5 MHz               | 710.0 MHz | 713.5 MHz | 706.5 MHz               | 710.0 MHz | 713.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.4                    | 25.4      | 25.4      | 24.1                    | 24.0      | 24.3      |
|                 |            | 1             | 12        | 25.4                    | 25.4      | 25.3      | 24.0                    | 24.1      | 24.4      |
|                 |            | 1             | 24        | 25.5                    | 25.4      | 25.6      | 24.1                    | 24.3      | 24.3      |
|                 |            | 12            | 0         | 24.3                    | 24.3      | 24.2      | 23.0                    | 22.9      | 23.2      |
|                 |            | 12            | 6         | 24.3                    | 24.2      | 24.3      | 23.0                    | 23.0      | 23.3      |
|                 |            | 12            | 11        | 24.3                    | 24.2      | 24.3      | 23.0                    | 23.1      | 23.3      |
|                 |            | 25            | 0         | 24.3                    | 24.3      | 24.4      | 22.9                    | 23.1      | 23.3      |
|                 | 16QAM      | 1             | 0         | 24.6                    | 24.9      | 24.7      | 23.5                    | 23.5      | 23.7      |
|                 |            | 1             | 12        | 24.7                    | 24.8      | 24.7      | 23.3                    | 23.5      | 23.8      |
|                 |            | 1             | 24        | 24.7                    | 24.9      | 25.0      | 23.3                    | 23.8      | 23.7      |
|                 |            | 12            | 0         | 23.2                    | 23.3      | 23.2      | 21.9                    | 21.9      | 22.2      |
|                 |            | 12            | 6         | 23.3                    | 23.3      | 23.2      | 21.9                    | 21.9      | 22.2      |
|                 |            | 12            | 11        | 23.3                    | 23.3      | 23.3      | 22.0                    | 22.1      | 22.2      |
|                 |            | 25            | 0         | 23.2                    | 23.3      | 23.3      | 21.9                    | 22.0      | 22.2      |
|                 | 64QAM      | 1             | 0         | 23.7                    | 23.8      | 23.5      | 22.5                    | 22.4      | 22.5      |
|                 |            | 1             | 12        | 23.7                    | 23.6      | 23.6      | 22.4                    | 22.6      | 22.5      |
|                 |            | 1             | 24        | 23.8                    | 23.8      | 23.8      | 22.2                    | 22.7      | 22.3      |
|                 |            | 12            | 0         | 22.3                    | 22.3      | 22.1      | 20.9                    | 20.9      | 21.2      |
|                 |            | 12            | 6         | 22.2                    | 22.2      | 22.2      | 20.9                    | 21.0      | 21.2      |
|                 |            | 12            | 11        | 22.3                    | 22.1      | 22.3      | 20.9                    | 21.1      | 21.1      |
|                 |            | 25            | 0         | 22.3                    | 22.2      | 22.3      | 20.9                    | 21.1      | 21.2      |

### OUTPUT POWER FOR LTE BAND 17 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 23780                   | 23790     | 23800     | 23780                   | 23790     | 23800     |
|                 |            |               |           | 709.0 MHz               | 710.0 MHz | 711.0 MHz | 709.0 MHz               | 710.0 MHz | 711.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 25.4                    | 25.4      | 25.4      | 24.2                    | 24.0      | 24.2      |
|                 |            | 1             | 24        | 25.5                    | 25.4      | 25.4      | 24.1                    | 24.1      | 24.3      |
|                 |            | 1             | 49        | 25.5                    | 25.5      | 25.7      | 24.5                    | 24.4      | 24.4      |
|                 |            | 25            | 0         | 24.4                    | 24.4      | 24.4      | 23.1                    | 23.0      | 23.1      |
|                 |            | 25            | 12        | 24.4                    | 24.3      | 24.4      | 23.1                    | 23.1      | 23.2      |
|                 |            | 25            | 24        | 24.4                    | 24.4      | 24.4      | 23.4                    | 23.3      | 23.4      |
|                 |            | 50            | 0         | 24.4                    | 24.4      | 24.4      | 23.1                    | 23.2      | 23.3      |
|                 | 16QAM      | 1             | 0         | 24.7                    | 24.7      | 24.8      | 23.4                    | 23.4      | 23.6      |
|                 |            | 1             | 24        | 24.9                    | 24.7      | 24.8      | 23.3                    | 23.5      | 23.6      |
|                 |            | 1             | 49        | 24.8                    | 24.7      | 25.0      | 23.7                    | 23.8      | 23.7      |
|                 |            | 25            | 0         | 23.4                    | 23.4      | 23.4      | 22.1                    | 22.1      | 22.1      |
|                 |            | 25            | 12        | 23.4                    | 23.4      | 23.4      | 22.2                    | 22.2      | 22.3      |
|                 |            | 25            | 24        | 23.4                    | 23.4      | 23.4      | 22.4                    | 22.4      | 22.4      |
|                 |            | 50            | 0         | 23.4                    | 23.4      | 23.4      | 22.2                    | 22.2      | 22.4      |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.6      | 23.7      | 22.4                    | 22.4      | 22.3      |
|                 |            | 1             | 24        | 23.6                    | 23.5      | 23.6      | 22.4                    | 22.3      | 22.5      |
|                 |            | 1             | 49        | 23.7                    | 23.6      | 23.9      | 22.5                    | 22.5      | 22.5      |
|                 |            | 25            | 0         | 22.5                    | 22.5      | 22.5      | 21.0                    | 21.1      | 21.1      |
|                 |            | 25            | 12        | 22.4                    | 22.3      | 22.3      | 21.1                    | 21.2      | 21.3      |
|                 |            | 25            | 24        | 22.3                    | 22.3      | 22.4      | 21.3                    | 21.3      | 21.3      |
|                 |            | 50            | 0         | 22.4                    | 22.3      | 22.4      | 21.2                    | 21.3      | 21.3      |

## 7.8. LTE BAND 25

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/18/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 25 (1.4 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 26047                   | 26365      | 26683      | 26047                   | 26365      | 26683      |
|                 |            |               |           | 1850.7 MHz              | 1882.5 MHz | 1914.3 MHz | 1850.7 MHz              | 1882.5 MHz | 1914.3 MHz |
| 1.4             | QPSK       | 1             | 0         | 25.2                    | 25.1       | 25.2       | 18.5                    | 17.9       | 18.1       |
|                 |            | 1             | 2         | 25.2                    | 25.0       | 25.2       | 18.4                    | 17.8       | 18.1       |
|                 |            | 1             | 5         | 25.2                    | 25.1       | 25.2       | 18.4                    | 17.9       | 18.1       |
|                 |            | 3             | 0         | 25.0                    | 25.0       | 25.1       | 18.4                    | 17.8       | 18.0       |
|                 |            | 3             | 1         | 25.1                    | 25.0       | 25.0       | 18.4                    | 17.8       | 18.0       |
|                 |            | 3             | 2         | 25.1                    | 25.0       | 25.1       | 18.4                    | 17.8       | 18.0       |
|                 |            | 6             | 0         | 24.0                    | 23.9       | 24.0       | 17.8                    | 17.3       | 17.3       |
|                 | 16QAM      | 1             | 0         | 24.5                    | 24.2       | 24.5       | 18.1                    | 17.6       | 17.8       |
|                 |            | 1             | 2         | 24.4                    | 24.2       | 24.4       | 18.1                    | 17.6       | 17.8       |
|                 |            | 1             | 5         | 24.5                    | 24.3       | 24.5       | 18.1                    | 17.6       | 17.8       |
|                 |            | 3             | 0         | 24.1                    | 24.0       | 24.2       | 17.8                    | 17.4       | 17.5       |
|                 |            | 3             | 1         | 24.2                    | 24.0       | 24.2       | 17.8                    | 17.4       | 17.5       |
|                 |            | 3             | 2         | 24.2                    | 24.0       | 24.2       | 17.7                    | 17.3       | 17.5       |
|                 |            | 6             | 0         | 23.1                    | 22.8       | 23.0       | 16.7                    | 16.2       | 16.5       |
|                 | 64QAM      | 1             | 0         | 23.7                    | 23.2       | 23.5       | 17.4                    | 16.7       | 16.8       |
|                 |            | 1             | 2         | 23.6                    | 23.2       | 23.5       | 17.2                    | 16.6       | 16.7       |
|                 |            | 1             | 5         | 23.6                    | 23.3       | 23.4       | 17.3                    | 16.8       | 16.7       |
|                 |            | 3             | 0         | 23.4                    | 23.1       | 23.3       | 17.0                    | 16.5       | 16.6       |
|                 |            | 3             | 1         | 23.4                    | 23.1       | 23.4       | 17.0                    | 16.5       | 16.6       |
|                 |            | 3             | 2         | 23.3                    | 23.1       | 23.3       | 17.0                    | 16.5       | 16.6       |
|                 |            | 6             | 0         | 22.1                    | 22.1       | 22.2       | 15.8                    | 15.5       | 15.5       |

### OUTPUT POWER FOR LTE BAND 25 (3.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 26055                   | 26365      | 26675      | 26055                   | 26365      | 26675      |
|                 |            |               |           | 1851.5 MHz              | 1882.5 MHz | 1913.5 MHz | 1851.5 MHz              | 1882.5 MHz | 1913.5 MHz |
| 3.0             | QPSK       | 1             | 0         | 25.1                    | 25.0       | 25.3       | 18.4                    | 17.9       | 18.1       |
|                 |            | 1             | 7         | 25.2                    | 25.1       | 25.3       | 18.3                    | 17.9       | 18.1       |
|                 |            | 1             | 14        | 25.2                    | 25.1       | 25.2       | 18.3                    | 17.9       | 18.0       |
|                 |            | 8             | 0         | 24.0                    | 23.9       | 24.2       | 17.8                    | 17.3       | 17.4       |
|                 |            | 8             | 4         | 24.0                    | 23.9       | 24.2       | 17.8                    | 17.3       | 17.4       |
|                 |            | 8             | 7         | 24.0                    | 24.0       | 24.2       | 17.7                    | 17.3       | 17.4       |
|                 | 16QAM      | 15            | 0         | 24.0                    | 24.0       | 24.2       | 17.8                    | 17.3       | 17.5       |
|                 |            | 1             | 0         | 24.4                    | 24.3       | 24.5       | 18.1                    | 17.6       | 17.8       |
|                 |            | 1             | 7         | 24.4                    | 24.4       | 24.5       | 18.1                    | 17.6       | 17.8       |
|                 |            | 1             | 14        | 24.5                    | 24.3       | 24.4       | 18.0                    | 17.7       | 17.8       |
|                 |            | 8             | 0         | 23.0                    | 22.9       | 23.1       | 16.7                    | 16.2       | 16.5       |
|                 |            | 8             | 4         | 23.1                    | 22.9       | 23.1       | 16.7                    | 16.2       | 16.4       |
|                 | 64QAM      | 8             | 7         | 23.1                    | 22.9       | 23.1       | 16.7                    | 16.3       | 16.5       |
|                 |            | 15            | 0         | 23.1                    | 22.9       | 23.1       | 16.7                    | 16.3       | 16.5       |
|                 |            | 1             | 0         | 23.3                    | 23.3       | 23.5       | 17.0                    | 16.7       | 16.8       |
|                 |            | 1             | 7         | 23.5                    | 23.4       | 23.5       | 17.1                    | 16.8       | 16.7       |
|                 |            | 1             | 14        | 23.4                    | 23.5       | 23.4       | 17.0                    | 16.8       | 16.7       |
|                 |            | 8             | 0         | 22.0                    | 22.0       | 22.1       | 15.7                    | 15.4       | 15.5       |
|                 |            | 8             | 4         | 22.0                    | 22.0       | 22.1       | 15.7                    | 15.4       | 15.5       |
|                 |            | 8             | 7         | 22.0                    | 22.0       | 22.1       | 15.7                    | 15.4       | 15.5       |
|                 |            | 15            | 0         | 22.1                    | 22.0       | 22.1       | 15.7                    | 15.4       | 15.4       |

### OUTPUT POWER FOR LTE BAND 25 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 26065                   | 26365      | 26665      | 26065                   | 26365      | 26665      |
|                 |            |               |           | 1852.5 MHz              | 1882.5 MHz | 1912.5 MHz | 1852.5 MHz              | 1882.5 MHz | 1912.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.2                    | 25.2       | 25.6       | 18.4                    | 17.9       | 18.2       |
|                 |            | 1             | 12        | 25.2                    | 25.2       | 25.4       | 18.4                    | 17.9       | 18.2       |
|                 |            | 1             | 24        | 25.3                    | 25.2       | 25.3       | 18.3                    | 18.0       | 18.1       |
|                 |            | 12            | 0         | 24.1                    | 24.1       | 24.5       | 17.9                    | 17.4       | 17.6       |
|                 |            | 12            | 6         | 24.1                    | 24.1       | 24.3       | 17.9                    | 17.4       | 17.6       |
|                 |            | 12            | 11        | 24.2                    | 24.1       | 24.3       | 17.8                    | 17.4       | 17.7       |
|                 |            | 25            | 0         | 24.1                    | 24.1       | 24.3       | 17.9                    | 17.4       | 17.6       |
|                 | 16QAM      | 1             | 0         | 24.5                    | 24.4       | 25.0       | 18.2                    | 17.7       | 18.1       |
|                 |            | 1             | 12        | 24.6                    | 24.4       | 24.8       | 18.2                    | 17.6       | 18.0       |
|                 |            | 1             | 24        | 24.7                    | 24.5       | 24.7       | 18.1                    | 17.8       | 17.9       |
|                 |            | 12            | 0         | 23.1                    | 23.1       | 23.5       | 16.9                    | 16.4       | 16.6       |
|                 |            | 12            | 6         | 23.1                    | 23.1       | 23.4       | 16.8                    | 16.4       | 16.6       |
|                 |            | 12            | 11        | 23.2                    | 23.1       | 23.3       | 16.8                    | 16.4       | 16.6       |
|                 |            | 25            | 0         | 23.2                    | 23.1       | 23.3       | 16.8                    | 16.4       | 16.6       |
|                 | 64QAM      | 1             | 0         | 23.5                    | 23.4       | 24.0       | 17.1                    | 16.8       | 17.2       |
|                 |            | 1             | 12        | 23.5                    | 23.4       | 23.8       | 17.1                    | 16.8       | 17.0       |
|                 |            | 1             | 24        | 23.5                    | 23.6       | 23.7       | 17.1                    | 16.9       | 17.0       |
|                 |            | 12            | 0         | 22.2                    | 22.2       | 22.5       | 15.9                    | 15.5       | 15.7       |
|                 |            | 12            | 6         | 22.2                    | 22.1       | 22.3       | 15.9                    | 15.6       | 15.6       |
|                 |            | 12            | 11        | 22.2                    | 22.2       | 22.3       | 15.9                    | 15.5       | 15.6       |
|                 |            | 25            | 0         | 22.2                    | 22.2       | 22.4       | 15.9                    | 15.6       | 15.6       |

### OUTPUT POWER FOR LTE BAND 25 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 26090                   | 26365      | 26640      | 26090                   | 26365      | 26640      |
|                 |            |               |           | 1855.0 MHz              | 1882.5 MHz | 1910.0 MHz | 1855.0 MHz              | 1882.5 MHz | 1910.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 25.3                    | 25.2       | 25.6       | 18.5                    | 18.0       | 18.3       |
|                 |            | 1             | 24        | 25.4                    | 25.2       | 25.7       | 18.3                    | 17.9       | 18.2       |
|                 |            | 1             | 49        | 25.6                    | 25.3       | 25.3       | 18.3                    | 18.1       | 18.2       |
|                 |            | 25            | 0         | 24.3                    | 24.2       | 24.6       | 18.0                    | 17.5       | 17.8       |
|                 |            | 25            | 12        | 24.4                    | 24.3       | 24.6       | 17.9                    | 17.5       | 17.7       |
|                 |            | 25            | 24        | 24.5                    | 24.3       | 24.4       | 17.7                    | 17.5       | 17.7       |
|                 |            | 50            | 0         | 24.4                    | 24.3       | 24.6       | 17.8                    | 17.5       | 17.7       |
|                 | 16QAM      | 1             | 0         | 24.6                    | 24.5       | 24.8       | 18.2                    | 17.7       | 18.1       |
|                 |            | 1             | 24        | 24.6                    | 24.5       | 25.0       | 18.0                    | 17.7       | 18.0       |
|                 |            | 1             | 49        | 24.8                    | 24.6       | 24.7       | 18.0                    | 17.9       | 17.9       |
|                 |            | 25            | 0         | 23.4                    | 23.2       | 23.6       | 17.0                    | 16.6       | 16.8       |
|                 |            | 25            | 12        | 23.4                    | 23.2       | 23.7       | 16.9                    | 16.6       | 16.7       |
|                 |            | 25            | 24        | 23.5                    | 23.3       | 23.5       | 16.8                    | 16.6       | 16.8       |
|                 |            | 50            | 0         | 23.4                    | 23.3       | 23.5       | 16.8                    | 16.6       | 16.8       |
|                 | 64QAM      | 1             | 0         | 23.5                    | 23.5       | 23.8       | 17.2                    | 16.7       | 17.1       |
|                 |            | 1             | 24        | 23.6                    | 23.5       | 23.9       | 17.3                    | 16.9       | 17.1       |
|                 |            | 1             | 49        | 23.7                    | 23.7       | 23.7       | 17.3                    | 16.9       | 16.9       |
|                 |            | 25            | 0         | 22.4                    | 22.4       | 22.7       | 16.1                    | 15.7       | 16.0       |
|                 |            | 25            | 12        | 22.5                    | 22.4       | 22.7       | 16.1                    | 15.8       | 15.9       |
|                 |            | 25            | 24        | 22.6                    | 22.5       | 22.6       | 16.1                    | 15.8       | 15.9       |
|                 |            | 50            | 0         | 22.5                    | 22.5       | 22.6       | 16.1                    | 15.8       | 15.9       |

### OUTPUT POWER FOR LTE BAND 25 (15.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 26115                   | 26365      | 26615      | 26115                   | 26365      | 26615      |
|                 |            |               |           | 1857.5 MHz              | 1882.5 MHz | 1907.5 MHz | 1857.5 MHz              | 1882.5 MHz | 1907.5 MHz |
| 15.0            | QPSK       | 1             | 0         | 25.3                    | 25.3       | 25.4       | 18.5                    | 18.0       | 18.4       |
|                 |            | 1             | 37        | 25.5                    | 25.2       | 25.6       | 18.2                    | 18.0       | 18.3       |
|                 |            | 1             | 74        | 25.4                    | 25.3       | 25.3       | 18.0                    | 18.2       | 18.2       |
|                 |            | 36            | 0         | 24.4                    | 24.3       | 24.5       | 17.9                    | 17.6       | 17.8       |
|                 |            | 36            | 16        | 24.5                    | 24.3       | 24.6       | 17.8                    | 17.6       | 17.8       |
|                 |            | 36            | 35        | 24.5                    | 24.4       | 24.5       | 17.7                    | 17.6       | 17.7       |
|                 |            | 75            | 0         | 24.5                    | 24.3       | 24.6       | 17.7                    | 17.6       | 17.8       |
|                 | 16QAM      | 1             | 0         | 24.5                    | 24.6       | 24.7       | 18.1                    | 17.7       | 18.1       |
|                 |            | 1             | 37        | 24.7                    | 24.5       | 24.9       | 18.0                    | 17.8       | 18.0       |
|                 |            | 1             | 74        | 24.7                    | 24.7       | 24.6       | 17.9                    | 18.1       | 18.0       |
|                 |            | 36            | 0         | 23.4                    | 23.3       | 23.6       | 16.9                    | 16.6       | 16.8       |
|                 |            | 36            | 16        | 23.5                    | 23.3       | 23.6       | 16.8                    | 16.6       | 16.8       |
|                 |            | 36            | 35        | 23.5                    | 23.3       | 23.6       | 16.8                    | 16.7       | 16.7       |
|                 |            | 75            | 0         | 23.5                    | 23.3       | 23.6       | 16.8                    | 16.6       | 16.8       |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.5       | 23.5       | 17.2                    | 16.7       | 17.0       |
|                 |            | 1             | 37        | 23.8                    | 23.5       | 23.9       | 17.2                    | 16.9       | 17.0       |
|                 |            | 1             | 74        | 23.9                    | 23.7       | 23.6       | 17.1                    | 16.9       | 16.8       |
|                 |            | 36            | 0         | 22.5                    | 22.4       | 22.6       | 16.1                    | 15.8       | 16.0       |
|                 |            | 36            | 16        | 22.6                    | 22.5       | 22.7       | 16.0                    | 15.8       | 16.0       |
|                 |            | 36            | 35        | 22.6                    | 22.5       | 22.7       | 15.9                    | 15.8       | 15.8       |
|                 |            | 75            | 0         | 22.5                    | 22.4       | 22.7       | 15.9                    | 15.8       | 15.9       |

### OUTPUT POWER FOR LTE BAND 25 (20.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 26140                   | 26365      | 26590      | 26140                   | 26365      | 26590      |
|                 |            |               |           | 1860.0 MHz              | 1882.5 MHz | 1905.0 MHz | 1860.0 MHz              | 1882.5 MHz | 1905.0 MHz |
| 20.0            | QPSK       | 1             | 0         | 25.3                    | 25.3       | 25.4       | 18.5                    | 18.0       | 18.4       |
|                 |            | 1             | 49        | 25.5                    | 25.2       | 25.5       | 18.2                    | 17.9       | 18.3       |
|                 |            | 1             | 99        | 25.4                    | 25.4       | 25.4       | 18.0                    | 18.3       | 18.2       |
|                 |            | 50            | 0         | 24.4                    | 24.3       | 24.4       | 17.9                    | 17.6       | 17.9       |
|                 |            | 50            | 24        | 24.4                    | 24.2       | 24.5       | 17.7                    | 17.5       | 17.8       |
|                 |            | 50            | 49        | 24.4                    | 24.3       | 24.6       | 17.6                    | 17.6       | 17.7       |
|                 |            | 100           | 0         | 24.4                    | 24.3       | 24.6       | 17.7                    | 17.6       | 17.8       |
|                 | 16QAM      | 1             | 0         | 24.7                    | 24.8       | 24.7       | 18.3                    | 17.8       | 18.1       |
|                 |            | 1             | 49        | 24.8                    | 24.6       | 24.8       | 18.2                    | 17.7       | 18.0       |
|                 |            | 1             | 99        | 24.8                    | 24.9       | 24.7       | 17.8                    | 18.2       | 18.0       |
|                 |            | 50            | 0         | 23.4                    | 23.3       | 23.5       | 16.9                    | 16.6       | 17.0       |
|                 |            | 50            | 24        | 23.5                    | 23.3       | 23.5       | 16.8                    | 16.6       | 16.9       |
|                 |            | 50            | 49        | 23.5                    | 23.3       | 23.6       | 16.7                    | 16.7       | 16.8       |
|                 |            | 100           | 0         | 23.5                    | 23.3       | 23.6       | 16.7                    | 16.6       | 16.9       |
|                 | 64QAM      | 1             | 0         | 23.5                    | 23.6       | 23.7       | 17.1                    | 16.8       | 17.1       |
|                 |            | 1             | 49        | 23.6                    | 23.6       | 23.9       | 17.0                    | 16.9       | 17.2       |
|                 |            | 1             | 99        | 23.6                    | 24.0       | 23.8       | 16.6                    | 17.1       | 17.0       |
|                 |            | 50            | 0         | 22.5                    | 22.5       | 22.5       | 16.0                    | 15.7       | 16.0       |
|                 |            | 50            | 24        | 22.6                    | 22.5       | 22.6       | 15.9                    | 15.8       | 16.0       |
|                 |            | 50            | 49        | 22.6                    | 22.5       | 22.7       | 15.8                    | 15.8       | 15.9       |
|                 |            | 100           | 0         | 22.6                    | 22.4       | 22.6       | 15.8                    | 15.7       | 16.0       |

## 7.9. LTE BAND 26

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/27/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 26 (1.4 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 26697                   | 26740     | 26783     | 26697                   | 26740     | 26783     |
|                 |            |               |           | 814.7 MHz               | 819.0 MHz | 823.3 MHz | 814.7 MHz               | 819.0 MHz | 823.3 MHz |
| 1.4             | QPSK       | 1             | 0         | 25.6                    | 25.5      | 25.6      | 24.1                    | 24.1      | 24.4      |
|                 |            | 1             | 2         | 25.5                    | 25.5      | 25.6      | 24.0                    | 24.1      | 24.4      |
|                 |            | 1             | 5         | 25.5                    | 25.5      | 25.6      | 24.0                    | 24.2      | 24.5      |
|                 |            | 3             | 0         | 25.4                    | 25.4      | 25.4      | 23.9                    | 24.0      | 24.3      |
|                 |            | 3             | 1         | 25.4                    | 25.4      | 25.4      | 23.9                    | 24.0      | 24.3      |
|                 |            | 3             | 2         | 25.4                    | 25.4      | 25.4      | 23.9                    | 24.1      | 24.3      |
|                 |            | 6             | 0         | 24.3                    | 24.3      | 24.3      | 22.9                    | 23.1      | 23.2      |
|                 | 16QAM      | 1             | 0         | 24.7                    | 24.8      | 24.8      | 23.3                    | 23.5      | 23.6      |
|                 |            | 1             | 2         | 24.7                    | 24.7      | 24.7      | 23.3                    | 23.4      | 23.6      |
|                 |            | 1             | 5         | 24.7                    | 24.7      | 24.7      | 23.2                    | 23.5      | 23.7      |
|                 |            | 3             | 0         | 24.4                    | 24.4      | 24.5      | 23.0                    | 23.1      | 23.4      |
|                 |            | 3             | 1         | 24.4                    | 24.4      | 24.5      | 22.9                    | 23.1      | 23.4      |
|                 |            | 3             | 2         | 24.5                    | 24.4      | 24.5      | 23.0                    | 23.2      | 23.4      |
|                 |            | 6             | 0         | 23.3                    | 23.2      | 23.4      | 21.8                    | 22.0      | 22.3      |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.5      | 23.4      | 22.7                    | 22.7      | 22.7      |
|                 |            | 1             | 2         | 23.7                    | 23.5      | 23.4      | 22.5                    | 22.7      | 22.7      |
|                 |            | 1             | 5         | 23.7                    | 23.4      | 23.4      | 22.6                    | 22.7      | 22.7      |
|                 |            | 3             | 0         | 23.3                    | 23.3      | 23.1      | 22.4                    | 22.4      | 22.5      |
|                 |            | 3             | 1         | 23.3                    | 23.3      | 23.1      | 22.3                    | 22.4      | 22.4      |
|                 |            | 3             | 2         | 23.4                    | 23.3      | 23.0      | 22.4                    | 22.4      | 22.4      |
|                 |            | 6             | 0         | 22.1                    | 22.2      | 22.0      | 21.3                    | 21.2      | 21.4      |

### OUTPUT POWER FOR LTE BAND 26 (3.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 26705                   | 26740     | 26775     | 26705                   | 26740     | 26775     |
|                 |            |               |           | 815.5 MHz               | 819.0 MHz | 822.5 MHz | 815.5 MHz               | 819.0 MHz | 822.5 MHz |
| 3.0             | QPSK       | 1             | 0         | 25.6                    | 25.4      | 25.5      | 24.1                    | 24.0      | 24.2      |
|                 |            | 1             | 7         | 25.5                    | 25.5      | 25.6      | 24.1                    | 24.2      | 24.4      |
|                 |            | 1             | 14        | 25.5                    | 25.4      | 25.5      | 24.1                    | 24.1      | 24.4      |
|                 |            | 8             | 0         | 24.4                    | 24.3      | 24.4      | 22.9                    | 23.0      | 23.1      |
|                 |            | 8             | 4         | 24.3                    | 24.3      | 24.4      | 22.9                    | 22.9      | 23.2      |
|                 |            | 8             | 7         | 24.3                    | 24.3      | 24.4      | 22.9                    | 23.0      | 23.2      |
|                 |            | 15            | 0         | 24.4                    | 24.4      | 24.4      | 22.9                    | 23.1      | 23.2      |
|                 | 16QAM      | 1             | 0         | 24.7                    | 24.7      | 24.7      | 23.4                    | 23.2      | 23.5      |
|                 |            | 1             | 7         | 24.8                    | 24.6      | 24.8      | 23.4                    | 23.4      | 23.6      |
|                 |            | 1             | 14        | 24.7                    | 24.6      | 24.7      | 23.2                    | 23.5      | 23.6      |
|                 |            | 8             | 0         | 23.4                    | 23.3      | 23.3      | 21.9                    | 21.9      | 22.1      |
|                 |            | 8             | 4         | 23.3                    | 23.2      | 23.4      | 21.9                    | 21.9      | 22.1      |
|                 |            | 8             | 7         | 23.3                    | 23.2      | 23.3      | 21.9                    | 22.0      | 22.1      |
|                 |            | 15            | 0         | 23.3                    | 23.2      | 23.4      | 21.9                    | 22.0      | 22.2      |
|                 | 64QAM      | 1             | 0         | 23.4                    | 23.5      | 23.4      | 22.6                    | 22.5      | 22.6      |
|                 |            | 1             | 7         | 23.5                    | 23.5      | 23.5      | 22.6                    | 22.7      | 22.8      |
|                 |            | 1             | 14        | 23.4                    | 23.3      | 23.4      | 22.5                    | 22.7      | 22.7      |
|                 |            | 8             | 0         | 22.0                    | 22.2      | 22.0      | 21.2                    | 21.2      | 21.3      |
|                 |            | 8             | 4         | 22.1                    | 22.1      | 22.0      | 21.2                    | 21.2      | 21.3      |
|                 |            | 8             | 7         | 22.1                    | 22.1      | 22.0      | 21.2                    | 21.2      | 21.4      |
|                 |            | 15            | 0         | 22.1                    | 22.1      | 22.1      | 21.2                    | 21.2      | 21.3      |

### OUTPUT POWER FOR LTE BAND 26 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 26715                   | 26740     | 26765     | 26715                   | 26740     | 26765     |
|                 |            |               |           | 816.5 MHz               | 819.0 MHz | 821.5 MHz | 816.5 MHz               | 819.0 MHz | 821.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.7                    | 25.6      | 25.5      | 24.2                    | 24.1      | 24.2      |
|                 |            | 1             | 12        | 25.6                    | 25.5      | 25.5      | 24.1                    | 24.2      | 24.3      |
|                 |            | 1             | 24        | 25.6                    | 25.6      | 25.6      | 24.1                    | 24.3      | 24.5      |
|                 |            | 12            | 0         | 24.5                    | 24.5      | 24.4      | 23.0                    | 23.1      | 23.2      |
|                 |            | 12            | 6         | 24.5                    | 24.5      | 24.5      | 23.0                    | 23.1      | 23.2      |
|                 |            | 12            | 11        | 24.5                    | 24.5      | 24.5      | 23.0                    | 23.1      | 23.3      |
|                 |            | 25            | 0         | 24.6                    | 24.5      | 24.5      | 23.0                    | 23.2      | 23.2      |
|                 | 16QAM      | 1             | 0         | 25.1                    | 24.9      | 24.9      | 23.6                    | 23.4      | 23.6      |
|                 |            | 1             | 12        | 25.0                    | 24.8      | 24.9      | 23.4                    | 23.5      | 23.6      |
|                 |            | 1             | 24        | 24.9                    | 24.9      | 24.9      | 23.5                    | 23.6      | 23.8      |
|                 |            | 12            | 0         | 23.5                    | 23.5      | 23.4      | 22.0                    | 22.0      | 22.2      |
|                 |            | 12            | 6         | 23.5                    | 23.5      | 23.5      | 22.0                    | 22.0      | 22.2      |
|                 |            | 12            | 11        | 23.4                    | 23.4      | 23.5      | 22.0                    | 22.1      | 22.3      |
|                 |            | 25            | 0         | 23.5                    | 23.4      | 23.5      | 22.0                    | 22.1      | 22.2      |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.7      | 23.6      | 22.7                    | 22.6      | 22.7      |
|                 |            | 1             | 12        | 23.7                    | 23.6      | 23.5      | 22.6                    | 22.7      | 22.8      |
|                 |            | 1             | 24        | 23.7                    | 23.5      | 23.6      | 22.6                    | 22.7      | 23.0      |
|                 |            | 12            | 0         | 22.2                    | 22.3      | 22.2      | 21.3                    | 21.2      | 21.3      |
|                 |            | 12            | 6         | 22.3                    | 22.3      | 22.1      | 21.3                    | 21.3      | 21.4      |
|                 |            | 12            | 11        | 22.3                    | 22.3      | 22.1      | 21.3                    | 21.3      | 21.5      |
|                 |            | 25            | 0         | 22.3                    | 22.3      | 22.1      | 21.2                    | 21.3      | 21.4      |

### OUTPUT POWER FOR LTE BAND 26 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |     | Ant 2                   |           |     |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----|-------------------------|-----------|-----|
|                 |            |               |           | Conducted Average (dBm) |           |     | Conducted Average (dBm) |           |     |
|                 |            |               |           | N/A                     | 26740     | N/A | N/A                     | 26740     | N/A |
|                 |            |               |           | N/A                     | 819.0 MHz | N/A | N/A                     | 819.0 MHz | N/A |
| 10.0            | QPSK       | 1             | 0         |                         | 25.7      |     |                         | 24.2      |     |
|                 |            | 1             | 24        |                         | 25.5      |     |                         | 24.2      |     |
|                 |            | 1             | 49        |                         | 25.7      |     |                         | 24.5      |     |
|                 |            | 25            | 0         |                         | 24.6      |     |                         | 23.1      |     |
|                 |            | 25            | 12        |                         | 24.6      |     |                         | 23.2      |     |
|                 |            | 25            | 24        |                         | 24.6      |     |                         | 23.4      |     |
|                 |            | 50            | 0         |                         | 24.6      |     |                         | 23.3      |     |
|                 | 16QAM      | 1             | 0         |                         | 25.0      |     |                         | 23.5      |     |
|                 |            | 1             | 24        |                         | 24.8      |     |                         | 23.5      |     |
|                 |            | 1             | 49        |                         | 24.9      |     |                         | 23.7      |     |
|                 |            | 25            | 0         |                         | 23.7      |     |                         | 22.2      |     |
|                 |            | 25            | 12        |                         | 23.6      |     |                         | 22.2      |     |
|                 |            | 25            | 24        |                         | 23.6      |     |                         | 22.4      |     |
|                 |            | 50            | 0         |                         | 23.6      |     |                         | 22.3      |     |
|                 | 64QAM      | 1             | 0         |                         | 23.6      |     |                         | 22.7      |     |
|                 |            | 1             | 24        |                         | 23.6      |     |                         | 22.6      |     |
|                 |            | 1             | 49        |                         | 23.5      |     |                         | 22.9      |     |
|                 |            | 25            | 0         |                         | 22.5      |     |                         | 21.4      |     |
|                 |            | 25            | 12        |                         | 22.5      |     |                         | 21.5      |     |
|                 |            | 25            | 24        |                         | 22.4      |     |                         | 21.6      |     |
|                 |            | 50            | 0         |                         | 22.5      |     |                         | 21.6      |     |

## 7.10. LTE BAND 30

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 39004 | Date: | 2/26/18 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 30 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 27685                   | 27710      | 27735      | 27685                   | 27710      | 27735      |
|                 |            |               |           | 2307.5 MHz              | 2310.0 MHz | 2312.5 MHz | 2307.5 MHz              | 2310.0 MHz | 2312.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.5                    | 25.5       | 25.5       | 20.5                    | 20.4       | 20.2       |
|                 |            | 1             | 12        | 25.5                    | 25.6       | 25.6       | 20.3                    | 20.3       | 20.2       |
|                 |            | 1             | 24        | 25.6                    | 25.7       | 25.6       | 20.3                    | 20.2       | 20.3       |
|                 |            | 12            | 0         | 24.4                    | 24.4       | 24.6       | 19.3                    | 19.3       | 19.2       |
|                 |            | 12            | 6         | 24.4                    | 24.5       | 24.6       | 19.3                    | 19.3       | 19.1       |
|                 |            | 12            | 11        | 24.4                    | 24.5       | 24.6       | 19.3                    | 19.2       | 19.2       |
|                 |            | 25            | 0         | 24.5                    | 24.5       | 24.6       | 19.4                    | 19.3       | 19.2       |
|                 | 16QAM      | 1             | 0         | 24.9                    | 24.8       | 25.0       | 19.8                    | 19.5       | 19.5       |
|                 |            | 1             | 12        | 24.9                    | 24.9       | 25.1       | 19.7                    | 19.5       | 19.5       |
|                 |            | 1             | 24        | 24.9                    | 25.1       | 25.1       | 19.7                    | 19.5       | 19.6       |
|                 |            | 12            | 0         | 23.4                    | 23.4       | 23.6       | 18.4                    | 18.3       | 18.2       |
|                 |            | 12            | 6         | 23.5                    | 23.5       | 23.6       | 18.4                    | 18.3       | 18.2       |
|                 |            | 12            | 11        | 23.4                    | 23.5       | 23.6       | 18.3                    | 18.2       | 18.2       |
|                 |            | 25            | 0         | 23.4                    | 23.5       | 23.5       | 18.4                    | 18.2       | 18.1       |
|                 | 64QAM      | 1             | 0         | 24.2                    | 24.4       | 24.4       | 18.7                    | 18.7       | 18.7       |
|                 |            | 1             | 12        | 24.3                    | 24.5       | 24.4       | 18.6                    | 18.6       | 18.7       |
|                 |            | 1             | 24        | 24.4                    | 24.6       | 24.4       | 18.6                    | 18.5       | 18.6       |
|                 |            | 12            | 0         | 22.9                    | 23.0       | 23.1       | 17.5                    | 17.4       | 17.2       |
|                 |            | 12            | 6         | 23.0                    | 23.0       | 23.1       | 17.5                    | 17.4       | 17.3       |
|                 |            | 12            | 11        | 23.0                    | 23.0       | 23.1       | 17.5                    | 17.4       | 17.3       |
|                 |            | 25            | 0         | 23.0                    | 23.0       | 23.1       | 17.5                    | 17.4       | 17.3       |

### OUTPUT POWER FOR LTE BAND 30 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |     | Ant 2                   |            |     |
|-----------------|------------|---------------|-----------|-------------------------|------------|-----|-------------------------|------------|-----|
|                 |            |               |           | Conducted Average (dBm) |            |     | Conducted Average (dBm) |            |     |
|                 |            |               |           | N/A                     | 27710      | N/A | N/A                     | 27710      | N/A |
|                 |            |               |           | N/A                     | 2310.0 MHz | N/A | N/A                     | 2310.0 MHz | N/A |
| 10.0            | QPSK       | 1             | 0         |                         | 25.6       |     |                         | 20.5       |     |
|                 |            | 1             | 24        |                         | 25.7       |     |                         | 20.4       |     |
|                 |            | 1             | 49        |                         | 25.7       |     |                         | 20.3       |     |
|                 |            | 25            | 0         |                         | 24.6       |     |                         | 19.4       |     |
|                 |            | 25            | 12        |                         | 24.6       |     |                         | 19.4       |     |
|                 |            | 25            | 24        |                         | 24.7       |     |                         | 19.3       |     |
|                 |            | 50            | 0         |                         | 24.7       |     |                         | 19.4       |     |
|                 | 16QAM      | 1             | 0         |                         | 24.9       |     |                         | 19.8       |     |
|                 |            | 1             | 24        |                         | 25.0       |     |                         | 19.6       |     |
|                 |            | 1             | 49        |                         | 25.1       |     |                         | 19.6       |     |
|                 |            | 25            | 0         |                         | 23.6       |     |                         | 18.5       |     |
|                 |            | 25            | 12        |                         | 23.7       |     |                         | 18.4       |     |
|                 |            | 25            | 24        |                         | 23.7       |     |                         | 18.3       |     |
|                 |            | 50            | 0         |                         | 23.7       |     |                         | 18.4       |     |
|                 | 64QAM      | 1             | 0         |                         | 24.2       |     |                         | 18.7       |     |
|                 |            | 1             | 24        |                         | 24.4       |     |                         | 18.6       |     |
|                 |            | 1             | 49        |                         | 24.5       |     |                         | 18.6       |     |
|                 |            | 25            | 0         |                         | 23.2       |     |                         | 17.6       |     |
|                 |            | 25            | 12        |                         | 23.3       |     |                         | 17.5       |     |
|                 |            | 25            | 24        |                         | 23.3       |     |                         | 17.5       |     |
|                 |            | 50            | 0         |                         | 23.3       |     |                         | 17.6       |     |

## 7.11. LTE BAND 41

|     |       |       |        |
|-----|-------|-------|--------|
| ID: | 19467 | Date: | 3/8/19 |
|-----|-------|-------|--------|

### OUTPUT POWER FOR LTE BAND 41 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 39675                   | 40620      | 41565      | 39675                   | 40620      | 41565      |
|                 |            |               |           | 2498.5 MHz              | 2593.0 MHz | 2687.5 MHz | 2498.5 MHz              | 2593.0 MHz | 2687.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 26.8                    | 28.6       | 28.4       | 19.7                    | 21.3       | 18.5       |
|                 |            | 1             | 12        | 27.7                    | 28.5       | 28.5       | 21.5                    | 21.3       | 18.4       |
|                 |            | 1             | 24        | 27.7                    | 28.5       | 28.5       | 21.5                    | 21.3       | 18.4       |
|                 |            | 12            | 0         | 24.6                    | 27.4       | 27.4       | 18.4                    | 20.2       | 17.3       |
|                 |            | 12            | 6         | 24.6                    | 27.4       | 27.4       | 18.4                    | 20.2       | 17.3       |
|                 |            | 12            | 11        | 26.6                    | 27.4       | 27.4       | 20.5                    | 20.2       | 17.3       |
|                 |            | 25            | 0         | 24.6                    | 27.4       | 27.4       | 18.5                    | 20.2       | 17.3       |
|                 | 16QAM      | 1             | 0         | 25.1                    | 28.1       | 27.9       | 19.1                    | 20.8       | 20.8       |
|                 |            | 1             | 12        | 27.1                    | 27.9       | 27.9       | 20.9                    | 20.7       | 20.7       |
|                 |            | 1             | 24        | 27.1                    | 28.0       | 27.9       | 21.0                    | 20.8       | 20.7       |
|                 |            | 12            | 0         | 23.6                    | 26.4       | 26.5       | 17.4                    | 19.2       | 19.2       |
|                 |            | 12            | 6         | 23.6                    | 26.4       | 26.4       | 17.4                    | 19.2       | 19.3       |
|                 |            | 12            | 11        | 25.7                    | 26.4       | 26.4       | 19.5                    | 19.2       | 19.3       |
|                 |            | 25            | 0         | 23.6                    | 26.5       | 26.4       | 14.5                    | 19.2       | 19.3       |
|                 | 64QAM      | 1             | 0         | 24.0                    | 26.8       | 26.6       | 17.2                    | 19.0       | 19.0       |
|                 |            | 1             | 12        | 26.0                    | 26.8       | 26.7       | 19.0                    | 19.0       | 18.8       |
|                 |            | 1             | 24        | 26.0                    | 26.9       | 26.6       | 19.1                    | 19.1       | 18.9       |
|                 |            | 12            | 0         | 22.5                    | 25.3       | 25.4       | 15.8                    | 17.7       | 17.6       |
|                 |            | 12            | 6         | 22.5                    | 25.3       | 25.2       | 15.8                    | 17.7       | 17.5       |
|                 |            | 12            | 11        | 24.6                    | 25.3       | 25.2       | 17.7                    | 17.7       | 17.6       |
|                 |            | 25            | 0         | 22.6                    | 25.4       | 25.3       | 15.7                    | 17.6       | 17.5       |

### OUTPUT POWER FOR LTE BAND 41 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 39700                   | 40620      | 41540      | 39700                   | 40620      | 41540      |
|                 |            |               |           | 2501.0 MHz              | 2593.0 MHz | 2685.0 MHz | 2501.0 MHz              | 2593.0 MHz | 2685.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 24.8                    | 28.7       | 28.4       | 18.5                    | 21.3       | 21.3       |
|                 |            | 1             | 24        | 27.7                    | 28.6       | 28.4       | 21.5                    | 21.2       | 21.2       |
|                 |            | 1             | 49        | 27.7                    | 28.6       | 28.5       | 21.4                    | 21.2       | 21.2       |
|                 |            | 25            | 0         | 24.7                    | 27.7       | 27.5       | 18.5                    | 20.2       | 20.3       |
|                 |            | 25            | 12        | 26.7                    | 27.6       | 27.4       | 20.4                    | 20.2       | 20.2       |
|                 |            | 25            | 24        | 25.7                    | 27.6       | 27.5       | 19.4                    | 20.2       | 20.2       |
|                 |            | 50            | 0         | 24.7                    | 27.6       | 27.5       | 18.4                    | 20.2       | 20.2       |
|                 | 16QAM      | 1             | 0         | 24.1                    | 28.2       | 27.8       | 17.9                    | 20.7       | 20.5       |
|                 |            | 1             | 24        | 27.1                    | 28.0       | 27.8       | 20.8                    | 20.6       | 20.5       |
|                 |            | 1             | 49        | 27.2                    | 28.0       | 27.8       | 20.7                    | 20.6       | 20.5       |
|                 |            | 25            | 0         | 23.8                    | 26.7       | 26.5       | 17.5                    | 19.3       | 19.3       |
|                 |            | 25            | 12        | 25.8                    | 26.7       | 26.4       | 19.5                    | 19.3       | 19.3       |
|                 |            | 25            | 24        | 24.8                    | 26.7       | 26.5       | 18.4                    | 19.3       | 19.3       |
|                 |            | 50            | 0         | 23.8                    | 26.6       | 26.4       | 17.4                    | 19.3       | 19.3       |
|                 | 64QAM      | 1             | 0         | 23.0                    | 27.0       | 26.6       | 16.2                    | 19.1       | 18.8       |
|                 |            | 1             | 24        | 26.1                    | 26.9       | 26.7       | 19.0                    | 19.0       | 18.8       |
|                 |            | 1             | 49        | 26.2                    | 27.0       | 26.7       | 19.2                    | 19.1       | 18.8       |
|                 |            | 25            | 0         | 22.7                    | 25.6       | 25.4       | 15.8                    | 17.8       | 17.7       |
|                 |            | 25            | 12        | 24.6                    | 25.5       | 25.4       | 17.8                    | 17.8       | 17.7       |
|                 |            | 25            | 24        | 23.7                    | 25.6       | 25.5       | 16.8                    | 17.8       | 17.7       |
|                 |            | 50            | 0         | 22.6                    | 25.5       | 25.4       | 15.8                    | 17.8       | 17.6       |

### OUTPUT POWER FOR LTE BAND 41 (15.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 39725                   | 40620      | 41515      | 39725                   | 40620      | 41515      |
|                 |            |               |           | 2503.5 MHz              | 2593.0 MHz | 2682.5 MHz | 2503.5 MHz              | 2593.0 MHz | 2682.5 MHz |
| 15.0            | QPSK       | 1             | 0         | 24.7                    | 28.7       | 28.3       | 18.6                    | 21.4       | 21.3       |
|                 |            | 1             | 37        | 27.7                    | 28.6       | 28.4       | 21.5                    | 21.3       | 21.3       |
|                 |            | 1             | 74        | 27.6                    | 28.6       | 28.4       | 21.5                    | 21.3       | 21.3       |
|                 |            | 36            | 0         | 23.6                    | 27.6       | 27.3       | 17.6                    | 20.3       | 17.4       |
|                 |            | 36            | 16        | 26.7                    | 27.6       | 27.4       | 20.5                    | 20.3       | 17.4       |
|                 |            | 36            | 35        | 25.7                    | 27.5       | 27.4       | 19.5                    | 20.3       | 17.4       |
|                 |            | 75            | 0         | 23.7                    | 27.5       | 27.3       | 17.4                    | 20.3       | 17.4       |
|                 | 16QAM      | 1             | 0         | 24.0                    | 28.0       | 27.7       | 18.0                    | 20.7       | 17.8       |
|                 |            | 1             | 37        | 27.1                    | 28.0       | 27.7       | 20.9                    | 20.6       | 17.8       |
|                 |            | 1             | 74        | 27.1                    | 28.0       | 27.7       | 20.9                    | 20.7       | 17.7       |
|                 |            | 36            | 0         | 22.8                    | 26.6       | 26.5       | 16.6                    | 19.4       | 19.5       |
|                 |            | 36            | 16        | 25.8                    | 26.7       | 26.5       | 19.5                    | 19.5       | 19.5       |
|                 |            | 36            | 35        | 24.7                    | 26.6       | 26.5       | 18.5                    | 19.5       | 19.4       |
|                 |            | 75            | 0         | 22.8                    | 26.6       | 26.4       | 16.5                    | 19.4       | 19.4       |
|                 | 64QAM      | 1             | 0         | 23.0                    | 26.9       | 26.6       | 16.3                    | 19.1       | 19.0       |
|                 |            | 1             | 37        | 26.1                    | 26.9       | 26.5       | 19.1                    | 19.1       | 18.9       |
|                 |            | 1             | 74        | 26.1                    | 26.9       | 26.6       | 19.4                    | 19.1       | 18.8       |
|                 |            | 36            | 0         | 21.6                    | 25.5       | 25.3       | 14.9                    | 17.8       | 17.8       |
|                 |            | 36            | 16        | 24.7                    | 25.5       | 25.4       | 17.9                    | 17.9       | 17.8       |
|                 |            | 36            | 35        | 23.7                    | 25.5       | 25.5       | 16.9                    | 17.8       | 17.8       |
|                 |            | 75            | 0         | 21.6                    | 25.5       | 25.3       | 14.8                    | 17.8       | 17.6       |

### OUTPUT POWER FOR LTE BAND 41 (20.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 39750                   | 40620      | 41490      | 39750                   | 40620      | 41490      |
|                 |            |               |           | 2506.0 MHz              | 2593.0 MHz | 2680.0 MHz | 2506.0 MHz              | 2593.0 MHz | 2680.0 MHz |
| 20.0            | QPSK       | 1             | 0         | 24.6                    | 28.7       | 28.4       | 18.5                    | 21.1       | 21.2       |
|                 |            | 1             | 49        | 27.7                    | 28.6       | 28.4       | 21.4                    | 21.2       | 21.1       |
|                 |            | 1             | 99        | 27.7                    | 28.7       | 28.5       | 21.5                    | 21.2       | 21.2       |
|                 |            | 50            | 0         | 23.6                    | 27.6       | 27.3       | 17.4                    | 20.1       | 20.1       |
|                 |            | 50            | 24        | 26.5                    | 27.6       | 27.3       | 20.3                    | 20.1       | 20.1       |
|                 |            | 50            | 49        | 25.6                    | 27.5       | 27.4       | 19.4                    | 20.1       | 20.1       |
|                 |            | 100           | 0         | 23.6                    | 27.5       | 27.3       | 17.3                    | 20.1       | 20.1       |
|                 | 16QAM      | 1             | 0         | 24.0                    | 28.2       | 27.9       | 17.9                    | 20.7       | 20.6       |
|                 |            | 1             | 49        | 27.2                    | 28.2       | 27.8       | 20.9                    | 20.7       | 20.5       |
|                 |            | 1             | 99        | 27.2                    | 28.1       | 28.0       | 21.1                    | 20.7       | 20.6       |
|                 |            | 50            | 0         | 22.6                    | 26.7       | 26.3       | 16.4                    | 19.2       | 19.2       |
|                 |            | 50            | 24        | 25.6                    | 26.6       | 26.4       | 19.4                    | 19.2       | 19.1       |
|                 |            | 50            | 49        | 24.7                    | 26.6       | 26.4       | 18.4                    | 19.2       | 19.1       |
|                 |            | 100           | 0         | 22.6                    | 26.6       | 26.4       | 16.3                    | 19.2       | 19.1       |
|                 | 64QAM      | 1             | 0         | 23.0                    | 26.8       | 26.8       | 16.0                    | 19.0       | 18.9       |
|                 |            | 1             | 49        | 26.0                    | 26.8       | 26.7       | 19.1                    | 19.0       | 18.8       |
|                 |            | 1             | 99        | 26.1                    | 27.0       | 26.8       | 19.3                    | 19.0       | 18.7       |
|                 |            | 50            | 0         | 21.6                    | 25.5       | 25.3       | 14.7                    | 17.6       | 17.6       |
|                 |            | 50            | 24        | 24.6                    | 25.5       | 25.3       | 17.8                    | 17.6       | 17.6       |
|                 |            | 50            | 49        | 23.6                    | 25.5       | 25.5       | 16.9                    | 17.7       | 17.6       |
|                 |            | 100           | 0         | 21.5                    | 25.4       | 25.3       | 14.7                    | 17.6       | 17.6       |

## 7.12. LTE BAND 48

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 19467 | Date: | 2/27/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 48 (5 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 3                   |                 |                 | Ant 4                   |                     |                     |
|-----------------|------------|---------------|-----------|-------------------------|-----------------|-----------------|-------------------------|---------------------|---------------------|
|                 |            |               |           | Conducted Average (dBm) |                 |                 | Conducted Average (dBm) |                     |                     |
|                 |            |               |           | 55265<br>3552.5 MHz     | 55990<br>3625.0 | 56715<br>3697.5 | 55260<br>3552.5         | 55990<br>3625.0 MHz | 56715<br>3697.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 20.9                    | 25.3            | 21.0            | 18.5                    | 22.2                | 18.5                |
|                 |            | 1             | 12        | 20.4                    | 24.9            | 20.5            | 18.0                    | 21.8                | 18.0                |
|                 |            | 1             | 24        | 21.0                    | 25.4            | 21.1            | 18.5                    | 22.2                | 18.4                |
|                 |            | 12            | 0         | 19.9                    | 24.9            | 19.9            | 17.5                    | 21.3                | 17.6                |
|                 |            | 12            | 6         | 19.8                    | 24.8            | 19.8            | 17.5                    | 21.2                | 17.5                |
|                 |            | 12            | 11        | 19.9                    | 24.9            | 19.8            | 17.5                    | 21.2                | 17.5                |
|                 |            | 25            | 0         | 19.8                    | 24.9            | 19.8            | 17.4                    | 21.1                | 17.4                |
|                 | 16QAM      | 1             | 0         | 20.2                    | 25.3            | 20.3            | 17.8                    | 21.7                | 17.8                |
|                 |            | 1             | 12        | 19.9                    | 24.9            | 19.8            | 17.4                    | 21.0                | 17.2                |
|                 |            | 1             | 24        | 20.4                    | 25.4            | 20.4            | 17.8                    | 21.7                | 17.7                |
|                 |            | 12            | 0         | 18.7                    | 23.8            | 18.7            | 16.4                    | 20.2                | 16.4                |
|                 |            | 12            | 6         | 18.6                    | 23.7            | 18.6            | 16.4                    | 20.1                | 16.3                |
|                 |            | 12            | 11        | 18.7                    | 23.8            | 18.6            | 16.4                    | 20.1                | 16.3                |
|                 |            | 25            | 0         | 18.6                    | 23.7            | 18.6            | 16.3                    | 20.1                | 16.3                |
|                 | 64QAM      | 1             | 0         | 19.3                    | 23.6            | 19.3            | 16.8                    | 20.5                | 16.8                |
|                 |            | 1             | 12        | 18.9                    | 23.3            | 18.9            | 16.5                    | 20.0                | 16.3                |
|                 |            | 1             | 24        | 19.3                    | 23.7            | 19.4            | 16.9                    | 20.4                | 16.8                |
|                 |            | 12            | 0         | 17.5                    | 21.8            | 17.6            | 15.2                    | 19.0                | 14.9                |
|                 |            | 12            | 6         | 17.5                    | 21.8            | 17.7            | 15.3                    | 19.1                | 15.0                |
|                 |            | 12            | 11        | 17.5                    | 21.9            | 17.7            | 15.3                    | 19.1                | 15.1                |
|                 |            | 25            | 0         | 17.5                    | 22.0            | 17.7            | 15.3                    | 19.0                | 15.2                |

### OUTPUT POWER FOR LTE BAND 48 (10 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 3                   |                     |                   | Ant 4                   |                     |                   |
|-----------------|------------|---------------|-----------|-------------------------|---------------------|-------------------|-------------------------|---------------------|-------------------|
|                 |            |               |           | Conducted Average (dBm) |                     |                   | Conducted Average (dBm) |                     |                   |
|                 |            |               |           | 55290<br>3555 MHz       | 55990<br>3625.0 MHz | 56690<br>3695 MHz | 55290<br>3555 MHz       | 55990<br>3625.0 MHz | 56690<br>3695 MHz |
| 10.0            | QPSK       | 1             | 0         | 21.0                    | 25.4                | 21.0              | 18.3                    | 22.5                | 18.5              |
|                 |            | 1             | 24        | 20.8                    | 25.2                | 20.7              | 18.0                    | 22.2                | 18.1              |
|                 |            | 1             | 49        | 21.0                    | 25.7                | 21.0              | 18.2                    | 22.3                | 18.3              |
|                 |            | 25            | 0         | 19.8                    | 25.0                | 19.7              | 17.2                    | 21.4                | 17.4              |
|                 |            | 25            | 12        | 19.8                    | 24.9                | 19.7              | 17.2                    | 21.3                | 17.4              |
|                 |            | 25            | 24        | 19.8                    | 25.0                | 19.8              | 17.2                    | 21.4                | 17.4              |
|                 |            | 50            | 0         | 19.6                    | 24.8                | 19.6              | 17.0                    | 21.1                | 17.2              |
|                 | 16QAM      | 1             | 0         | 20.2                    | 25.6                | 20.3              | 17.5                    | 21.7                | 17.9              |
|                 |            | 1             | 24        | 20.0                    | 25.3                | 20.1              | 17.2                    | 21.5                | 17.6              |
|                 |            | 1             | 49        | 20.2                    | 25.5                | 20.3              | 17.4                    | 21.6                | 17.7              |
|                 |            | 25            | 0         | 18.7                    | 23.9                | 18.6              | 16.2                    | 20.2                | 16.4              |
|                 |            | 25            | 12        | 18.7                    | 23.8                | 18.6              | 16.1                    | 20.2                | 16.3              |
|                 |            | 25            | 24        | 18.7                    | 24.0                | 18.6              | 16.1                    | 20.2                | 16.3              |
|                 |            | 50            | 0         | 18.6                    | 23.8                | 18.5              | 16.0                    | 20.1                | 16.3              |
|                 | 64QAM      | 1             | 0         | 19.1                    | 23.7                | 19.3              | 16.5                    | 20.6                | 16.8              |
|                 |            | 1             | 24        | 18.8                    | 23.4                | 19.2              | 16.2                    | 20.2                | 16.5              |
|                 |            | 1             | 49        | 18.9                    | 23.8                | 19.3              | 16.4                    | 20.5                | 16.6              |
|                 |            | 25            | 0         | 17.7                    | 22.2                | 17.7              | 15.2                    | 19.3                | 15.4              |
|                 |            | 25            | 12        | 17.7                    | 22.1                | 17.7              | 15.1                    | 19.2                | 15.3              |
|                 |            | 25            | 24        | 17.7                    | 22.2                | 17.7              | 15.2                    | 19.2                | 15.3              |
|                 |            | 50            | 0         | 17.5                    | 22.1                | 17.6              | 15.0                    | 19.1                | 15.2              |

### OUTPUT POWER FOR LTE BAND 48 (15 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 3                   |            |            | Ant 4                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 55315                   | 55990      | 56665      | 55315                   | 55990      | 56665      |
|                 |            |               |           | 3557.5 MHz              | 3625.0 MHz | 3692.5 MHz | 3557.5 MHz              | 3625.0 MHz | 3692.5 MHz |
| 15.0            | QPSK       | 1             | 0         | 20.9                    | 25.4       | 20.8       | 18.4                    | 22.3       | 18.4       |
|                 |            | 1             | 37        | 20.5                    | 25.1       | 20.5       | 18.1                    | 21.9       | 18.0       |
|                 |            | 1             | 74        | 20.8                    | 25.6       | 20.9       | 18.4                    | 22.1       | 18.3       |
|                 |            | 36            | 0         | 19.8                    | 24.9       | 19.7       | 17.4                    | 21.3       | 17.5       |
|                 |            | 36            | 16        | 19.7                    | 24.9       | 19.7       | 17.4                    | 21.3       | 17.4       |
|                 |            | 36            | 35        | 19.7                    | 25.0       | 19.7       | 17.4                    | 21.3       | 17.4       |
|                 |            | 75            | 0         | 19.5                    | 24.8       | 19.5       | 17.2                    | 21.1       | 17.1       |
|                 | 16QAM      | 1             | 0         | 20.1                    | 25.5       | 20.2       | 17.6                    | 21.7       | 17.8       |
|                 |            | 1             | 37        | 19.7                    | 25.2       | 19.8       | 17.3                    | 21.3       | 17.4       |
|                 |            | 1             | 74        | 20.0                    | 25.5       | 20.3       | 17.6                    | 21.5       | 17.7       |
|                 |            | 36            | 0         | 18.7                    | 23.9       | 18.7       | 16.4                    | 20.3       | 16.4       |
|                 |            | 36            | 16        | 18.7                    | 23.9       | 18.7       | 16.4                    | 20.3       | 16.4       |
|                 |            | 36            | 35        | 18.6                    | 23.9       | 18.7       | 16.3                    | 20.3       | 16.4       |
|                 |            | 75            | 0         | 18.5                    | 23.7       | 18.5       | 16.2                    | 20.1       | 16.1       |
|                 | 64QAM      | 1             | 0         | 19.2                    | 23.7       | 19.3       | 16.8                    | 20.7       | 16.8       |
|                 |            | 1             | 37        | 18.7                    | 23.3       | 19.0       | 16.5                    | 20.2       | 16.4       |
|                 |            | 1             | 74        | 19.0                    | 23.8       | 19.4       | 16.8                    | 20.4       | 16.7       |
|                 |            | 36            | 0         | 17.7                    | 22.2       | 17.7       | 15.4                    | 19.3       | 15.4       |
|                 |            | 36            | 16        | 17.7                    | 22.2       | 17.7       | 15.4                    | 19.3       | 15.3       |
|                 |            | 36            | 35        | 17.6                    | 22.2       | 17.7       | 15.3                    | 19.2       | 15.3       |
|                 |            | 75            | 0         | 17.5                    | 22.0       | 17.6       | 15.2                    | 19.0       | 15.1       |

### OUTPUT POWER FOR LTE BAND 48 (20 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 3                   |            |          | Ant 4                   |            |          |
|-----------------|------------|---------------|-----------|-------------------------|------------|----------|-------------------------|------------|----------|
|                 |            |               |           | Conducted Average (dBm) |            |          | Conducted Average (dBm) |            |          |
|                 |            |               |           | 55340                   | 55990      | 56640    | 55340                   | 55990      | 56640    |
|                 |            |               |           | 3560 MHz                | 3625.0 MHz | 3690 MHz | 3560 MHz                | 3625.0 MHz | 3690 MHz |
| 20.0            | QPSK       | 1             | 0         | 21.0                    | 25.6       | 20.8     | 18.4                    | 22.4       | 18.5     |
|                 |            | 1             | 49        | 20.7                    | 25.2       | 20.6     | 18.1                    | 22.2       | 18.3     |
|                 |            | 1             | 99        | 20.9                    | 25.7       | 21.0     | 18.3                    | 22.3       | 18.4     |
|                 |            | 50            | 0         | 19.8                    | 25.0       | 19.6     | 17.3                    | 21.4       | 17.5     |
|                 |            | 50            | 24        | 19.4                    | 24.8       | 19.3     | 17.0                    | 21.1       | 17.2     |
|                 |            | 50            | 49        | 19.7                    | 25.1       | 19.7     | 17.3                    | 21.4       | 17.4     |
|                 |            | 100           | 0         | 19.5                    | 24.8       | 19.4     | 17.0                    | 21.1       | 17.3     |
|                 | 16QAM      | 1             | 0         | 18.4                    | 25.6       | 18.2     | 17.7                    | 21.7       | 17.8     |
|                 |            | 1             | 49        | 18.0                    | 25.3       | 18.1     | 17.4                    | 21.5       | 17.6     |
|                 |            | 1             | 99        | 18.3                    | 25.7       | 18.4     | 17.6                    | 21.6       | 17.7     |
|                 |            | 50            | 0         | 18.8                    | 23.9       | 18.6     | 16.3                    | 20.4       | 16.5     |
|                 |            | 50            | 24        | 18.4                    | 23.7       | 18.3     | 16.0                    | 20.1       | 16.2     |
|                 |            | 50            | 49        | 18.6                    | 24.0       | 18.6     | 16.2                    | 20.3       | 16.4     |
|                 |            | 100           | 0         | 18.5                    | 23.8       | 18.4     | 16.0                    | 20.1       | 16.3     |
|                 | 64QAM      | 1             | 0         | 18.4                    | 24.1       | 18.3     | 16.8                    | 20.8       | 16.8     |
|                 |            | 1             | 49        | 18.0                    | 23.7       | 18.0     | 16.4                    | 20.6       | 16.6     |
|                 |            | 1             | 99        | 18.2                    | 24.0       | 18.2     | 16.6                    | 20.7       | 16.7     |
|                 |            | 50            | 0         | 17.8                    | 22.3       | 17.7     | 15.3                    | 19.3       | 15.5     |
|                 |            | 50            | 24        | 17.4                    | 22.0       | 17.4     | 14.9                    | 19.0       | 15.2     |
|                 |            | 50            | 49        | 17.6                    | 22.3       | 17.7     | 15.2                    | 19.3       | 15.4     |
|                 |            | 100           | 0         | 17.5                    | 22.2       | 17.5     | 15.0                    | 19.1       | 15.3     |

### 7.13. LTE BAND 66

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 19467 | Date: | 2/27/19 |
|-----|-------|-------|---------|

#### OUTPUT POWER FOR LTE BAND 66 (1.4 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 131979                  | 132322     | 132665     | 131979                  | 132322     | 132665     |
|                 |            |               |           | 1710.7 MHz              | 1745.0 MHz | 1779.3 MHz | 1710.7 MHz              | 1745.0 MHz | 1779.3 MHz |
| 1.4             | QPSK       | 1             | 0         | 25.5                    | 25.7       | 25.1       | 21.4                    | 21.3       | 21.1       |
|                 |            | 1             | 2         | 25.3                    | 25.6       | 25.1       | 21.3                    | 21.3       | 21.0       |
|                 |            | 1             | 5         | 25.4                    | 25.6       | 25.1       | 21.3                    | 21.3       | 21.1       |
|                 |            | 3             | 0         | 25.3                    | 25.5       | 25.0       | 21.2                    | 21.1       | 20.9       |
|                 |            | 3             | 1         | 25.2                    | 25.5       | 25.0       | 21.1                    | 21.1       | 20.9       |
|                 |            | 3             | 2         | 25.2                    | 25.5       | 25.0       | 21.1                    | 21.1       | 20.9       |
|                 | 16QAM      | 6             | 0         | 24.2                    | 24.5       | 24.0       | 20.1                    | 20.1       | 19.8       |
|                 |            | 1             | 0         | 24.7                    | 24.8       | 24.4       | 20.4                    | 20.6       | 20.4       |
|                 |            | 1             | 2         | 24.7                    | 24.7       | 24.4       | 20.4                    | 20.6       | 20.3       |
|                 |            | 1             | 5         | 24.7                    | 24.8       | 24.3       | 20.4                    | 20.6       | 20.3       |
|                 |            | 3             | 0         | 24.4                    | 24.5       | 24.1       | 20.2                    | 20.3       | 20.1       |
|                 |            | 3             | 1         | 24.4                    | 24.5       | 24.1       | 20.1                    | 20.3       | 20.0       |
|                 | 64QAM      | 3             | 2         | 24.4                    | 24.6       | 24.1       | 20.1                    | 20.2       | 20.0       |
|                 |            | 6             | 0         | 23.3                    | 23.5       | 22.9       | 19.0                    | 19.1       | 19.0       |
|                 |            | 1             | 0         | 23.5                    | 23.7       | 23.6       | 19.9                    | 19.5       | 19.3       |
|                 |            | 1             | 2         | 23.5                    | 23.6       | 23.5       | 19.8                    | 19.5       | 19.4       |
|                 |            | 1             | 5         | 23.5                    | 23.7       | 23.5       | 19.8                    | 19.4       | 19.3       |
|                 |            | 3             | 0         | 23.2                    | 23.5       | 23.2       | 19.5                    | 19.1       | 19.1       |
|                 | 64QAM      | 3             | 1         | 23.2                    | 23.6       | 23.2       | 19.5                    | 19.1       | 19.1       |
|                 |            | 3             | 2         | 23.2                    | 23.5       | 23.2       | 19.5                    | 19.1       | 19.1       |
|                 |            | 6             | 0         | 22.2                    | 22.4       | 22.0       | 18.2                    | 18.1       | 18.0       |

#### OUTPUT POWER FOR LTE BAND 66 (3.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 131987                  | 132322     | 132657     | 131987                  | 132322     | 132657     |
|                 |            |               |           | 1711.5 MHz              | 1745.0 MHz | 1778.5 MHz | 1711.5 MHz              | 1745.0 MHz | 1778.5 MHz |
| 3.0             | QPSK       | 1             | 0         | 25.4                    | 25.6       | 25.1       | 21.2                    | 21.4       | 21.1       |
|                 |            | 1             | 7         | 25.4                    | 25.7       | 25.1       | 21.3                    | 21.3       | 21.1       |
|                 |            | 1             | 14        | 25.3                    | 25.6       | 25.1       | 21.3                    | 21.2       | 21.0       |
|                 |            | 8             | 0         | 24.2                    | 24.5       | 23.9       | 20.1                    | 20.2       | 19.9       |
|                 |            | 8             | 4         | 24.2                    | 24.5       | 23.9       | 20.1                    | 20.1       | 19.9       |
|                 |            | 8             | 7         | 24.3                    | 24.5       | 23.9       | 20.1                    | 20.1       | 20.0       |
|                 | 16QAM      | 15            | 0         | 24.2                    | 24.5       | 23.9       | 20.1                    | 20.1       | 20.0       |
|                 |            | 1             | 0         | 24.5                    | 24.9       | 24.4       | 20.5                    | 20.7       | 20.4       |
|                 |            | 1             | 7         | 24.6                    | 25.0       | 24.3       | 20.5                    | 20.6       | 20.4       |
|                 |            | 1             | 14        | 24.6                    | 24.9       | 24.3       | 20.5                    | 20.5       | 20.4       |
|                 |            | 8             | 0         | 23.3                    | 23.5       | 22.9       | 19.1                    | 19.2       | 18.9       |
|                 |            | 8             | 4         | 23.3                    | 23.5       | 22.9       | 19.1                    | 19.1       | 18.9       |
|                 | 64QAM      | 8             | 7         | 23.2                    | 23.5       | 22.9       | 19.1                    | 19.1       | 18.9       |
|                 |            | 15            | 0         | 23.2                    | 23.5       | 22.9       | 19.0                    | 19.1       | 18.9       |
|                 |            | 1             | 0         | 23.3                    | 23.6       | 23.3       | 19.4                    | 19.4       | 19.2       |
|                 |            | 1             | 7         | 23.4                    | 23.7       | 23.4       | 19.5                    | 19.5       | 19.3       |
|                 |            | 1             | 14        | 23.4                    | 23.7       | 23.3       | 19.6                    | 19.4       | 19.3       |
|                 |            | 8             | 0         | 22.0                    | 22.4       | 22.0       | 18.2                    | 18.1       | 17.9       |
|                 | 64QAM      | 8             | 4         | 22.0                    | 22.3       | 22.0       | 18.2                    | 18.0       | 17.9       |
|                 |            | 8             | 7         | 22.0                    | 22.3       | 22.1       | 18.2                    | 18.0       | 17.9       |
|                 |            | 15            | 0         | 22.0                    | 22.3       | 22.0       | 18.2                    | 18.0       | 17.9       |

### OUTPUT POWER FOR LTE BAND 66 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 131997                  | 132322     | 132647     | 131997                  | 132322     | 132647     |
|                 |            |               |           | 1712.5 MHz              | 1745.0 MHz | 1777.5 MHz | 1712.5 MHz              | 1745.0 MHz | 1777.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.4                    | 25.5       | 25.2       | 21.3                    | 21.5       | 21.2       |
|                 |            | 1             | 12        | 25.4                    | 25.5       | 25.0       | 21.3                    | 21.3       | 21.1       |
|                 |            | 1             | 24        | 25.3                    | 25.5       | 25.1       | 21.4                    | 21.2       | 21.1       |
|                 |            | 12            | 0         | 24.3                    | 24.5       | 24.1       | 20.2                    | 20.3       | 20.0       |
|                 |            | 12            | 6         | 24.3                    | 24.5       | 24.0       | 20.2                    | 20.2       | 20.0       |
|                 |            | 12            | 11        | 24.3                    | 24.4       | 24.0       | 20.3                    | 20.2       | 20.0       |
|                 |            | 25            | 0         | 24.3                    | 24.5       | 24.0       | 20.2                    | 20.2       | 20.1       |
|                 | 16QAM      | 1             | 0         | 24.8                    | 24.7       | 24.6       | 20.6                    | 20.7       | 20.6       |
|                 |            | 1             | 12        | 24.7                    | 24.8       | 24.4       | 20.6                    | 20.6       | 20.5       |
|                 |            | 1             | 24        | 24.7                    | 24.8       | 24.5       | 20.7                    | 20.5       | 20.5       |
|                 |            | 12            | 0         | 23.3                    | 23.5       | 23.1       | 19.2                    | 19.3       | 19.1       |
|                 |            | 12            | 6         | 23.3                    | 23.5       | 23.0       | 19.2                    | 19.3       | 19.1       |
|                 |            | 12            | 11        | 23.3                    | 23.5       | 23.0       | 19.3                    | 19.2       | 19.1       |
|                 |            | 25            | 0         | 23.3                    | 23.4       | 23.0       | 19.2                    | 19.2       | 19.1       |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.8       | 23.6       | 19.9                    | 19.7       | 19.6       |
|                 |            | 1             | 12        | 23.5                    | 23.9       | 23.4       | 19.8                    | 19.6       | 19.5       |
|                 |            | 1             | 24        | 23.6                    | 23.9       | 23.5       | 19.9                    | 19.7       | 19.5       |
|                 |            | 12            | 0         | 22.2                    | 22.5       | 22.3       | 18.4                    | 18.2       | 18.3       |
|                 |            | 12            | 6         | 22.2                    | 22.5       | 22.2       | 18.4                    | 18.2       | 18.2       |
|                 |            | 12            | 11        | 22.2                    | 22.4       | 22.2       | 18.4                    | 18.2       | 18.2       |
|                 |            | 25            | 0         | 22.2                    | 22.4       | 22.2       | 18.4                    | 18.2       | 18.2       |
|                 |            | 25            | 0         | 22.2                    | 22.4       | 22.2       | 18.4                    | 18.2       | 18.2       |

### OUTPUT POWER FOR LTE BAND 66 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |            |            | Ant 2                   |            |            |
|-----------------|------------|---------------|-----------|-------------------------|------------|------------|-------------------------|------------|------------|
|                 |            |               |           | Conducted Average (dBm) |            |            | Conducted Average (dBm) |            |            |
|                 |            |               |           | 132022                  | 132322     | 132622     | 132022                  | 132322     | 132622     |
|                 |            |               |           | 1715.0 MHz              | 1745.0 MHz | 1775.0 MHz | 1715.0 MHz              | 1745.0 MHz | 1775.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 25.4                    | 25.5       | 25.5       | 21.4                    | 21.4       | 21.2       |
|                 |            | 1             | 24        | 25.4                    | 25.6       | 25.2       | 21.5                    | 21.4       | 21.2       |
|                 |            | 1             | 49        | 25.5                    | 25.6       | 25.1       | 21.4                    | 21.2       | 21.1       |
|                 |            | 25            | 0         | 24.4                    | 24.6       | 24.3       | 20.3                    | 20.4       | 20.1       |
|                 |            | 25            | 12        | 24.4                    | 24.6       | 24.2       | 20.4                    | 20.3       | 20.2       |
|                 |            | 25            | 24        | 24.4                    | 24.6       | 24.1       | 20.4                    | 20.2       | 20.2       |
|                 |            | 50            | 0         | 24.4                    | 24.6       | 24.2       | 20.4                    | 20.3       | 20.2       |
|                 | 16QAM      | 1             | 0         | 24.6                    | 24.8       | 24.9       | 20.6                    | 20.8       | 20.5       |
|                 |            | 1             | 24        | 24.6                    | 24.9       | 24.6       | 20.7                    | 20.7       | 20.6       |
|                 |            | 1             | 49        | 24.7                    | 24.9       | 24.5       | 20.7                    | 20.5       | 20.6       |
|                 |            | 25            | 0         | 23.5                    | 23.6       | 23.4       | 19.4                    | 19.5       | 19.2       |
|                 |            | 25            | 12        | 23.5                    | 23.7       | 23.3       | 19.5                    | 19.5       | 19.2       |
|                 |            | 25            | 24        | 23.5                    | 23.7       | 23.2       | 19.5                    | 19.3       | 19.3       |
|                 |            | 50            | 0         | 23.5                    | 23.6       | 23.3       | 19.5                    | 19.4       | 19.2       |
|                 | 64QAM      | 1             | 0         | 23.5                    | 23.7       | 23.8       | 19.7                    | 19.6       | 19.6       |
|                 |            | 1             | 24        | 23.5                    | 23.8       | 23.6       | 19.8                    | 19.5       | 19.6       |
|                 |            | 1             | 49        | 23.6                    | 23.9       | 23.4       | 19.7                    | 19.6       | 19.6       |
|                 |            | 25            | 0         | 22.5                    | 22.6       | 22.5       | 18.6                    | 18.4       | 18.4       |
|                 |            | 25            | 12        | 22.5                    | 22.7       | 22.4       | 18.6                    | 18.4       | 18.4       |
|                 |            | 25            | 24        | 22.5                    | 22.7       | 22.4       | 18.7                    | 18.5       | 18.4       |
|                 |            | 50            | 0         | 22.5                    | 22.6       | 22.5       | 18.6                    | 18.4       | 18.4       |
|                 |            | 50            | 0         | 22.5                    | 22.6       | 22.5       | 18.6                    | 18.4       | 18.4       |

### OUTPUT POWER FOR LTE BAND 66 (15.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |             |            | Ant 2                   |             |            |
|-----------------|------------|---------------|-----------|-------------------------|-------------|------------|-------------------------|-------------|------------|
|                 |            |               |           | Conducted Average (dBm) |             |            | Conducted Average (dBm) |             |            |
|                 |            |               |           | 132047                  | 132322      | 132597     | 132047                  | 132322      | 132597     |
|                 |            |               |           | 1717.5 MHz              | 1745.0 MHz  | 1772.5 MHz | 1717.5 MHz              | 1745.0 MHz  | 1772.5 MHz |
| 15.0            | QPSK       | 1             | 0         | 25.3                    | <b>25.5</b> | 25.5       | 21.3                    | <b>21.5</b> | 21.0       |
|                 |            | 1             | 37        | 25.4                    | 25.5        | 25.3       | 21.4                    | 21.3        | 21.1       |
|                 |            | 1             | 74        | 25.5                    | 25.5        | 25.1       | 21.5                    | 21.2        | 21.1       |
|                 |            | 36            | 0         | 24.4                    | 24.5        | 24.4       | 20.4                    | 20.5        | 20.1       |
|                 |            | 36            | 16        | 24.5                    | 24.6        | 24.3       | 20.4                    | 20.4        | 20.1       |
|                 |            | 36            | 35        | 24.5                    | 24.6        | 24.2       | 20.4                    | 20.2        | 20.1       |
|                 |            | 75            | 0         | 24.5                    | 24.6        | 24.3       | 20.4                    | 20.3        | 20.1       |
|                 | 16QAM      | 1             | 0         | 24.6                    | 24.9        | 24.9       | 20.6                    | <b>20.9</b> | 20.3       |
|                 |            | 1             | 37        | 24.8                    | 24.9        | 24.7       | 20.7                    | 20.7        | 20.5       |
|                 |            | 1             | 74        | 24.8                    | <b>25.0</b> | 24.4       | 20.8                    | 20.5        | 20.5       |
|                 |            | 36            | 0         | 23.5                    | 23.6        | 23.4       | 19.4                    | 19.5        | 19.2       |
|                 |            | 36            | 16        | 23.5                    | 23.7        | 23.3       | 19.4                    | 19.4        | 19.2       |
|                 |            | 36            | 35        | 23.5                    | 23.7        | 23.2       | 19.5                    | 19.3        | 19.2       |
|                 |            | 75            | 0         | 23.5                    | 23.6        | 23.3       | 19.4                    | 19.3        | 19.2       |
|                 | 64QAM      | 1             | 0         | 23.6                    | 23.7        | 23.7       | <b>19.8</b>             | 19.6        | 19.5       |
|                 |            | 1             | 37        | 23.7                    | 23.8        | 23.7       | 19.8                    | 19.6        | 19.6       |
|                 |            | 1             | 74        | <b>23.9</b>             | 23.8        | 23.5       | 19.6                    | 19.5        | 19.5       |
|                 |            | 36            | 0         | 22.4                    | 22.6        | 22.5       | 18.6                    | 18.4        | 18.3       |
|                 |            | 36            | 16        | 22.5                    | 22.6        | 22.5       | 18.6                    | 18.4        | 18.5       |
|                 |            | 36            | 35        | 22.5                    | 22.7        | 22.4       | 18.5                    | 18.5        | 18.4       |
|                 |            | 75            | 0         | 22.5                    | 22.6        | 22.5       | 18.6                    | 18.4        | 18.4       |

### OUTPUT POWER FOR LTE BAND 66 (20.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |             |             | Ant 2                   |             |            |
|-----------------|------------|---------------|-----------|-------------------------|-------------|-------------|-------------------------|-------------|------------|
|                 |            |               |           | Conducted Average (dBm) |             |             | Conducted Average (dBm) |             |            |
|                 |            |               |           | 132072                  | 132322      | 132572      | 132072                  | 132322      | 132572     |
|                 |            |               |           | 1720.0 MHz              | 1745.0 MHz  | 1770.0 MHz  | 1720.0 MHz              | 1745.0 MHz  | 1770.0 MHz |
| 20.0            | QPSK       | 1             | 0         | 25.4                    | <b>25.6</b> | 25.6        | 21.4                    | 21.4        | 21.1       |
|                 |            | 1             | 49        | 25.4                    | 25.5        | 25.5        | <b>21.5</b>             | 21.3        | 21.1       |
|                 |            | 1             | 99        | 25.5                    | 25.6        | 25.1        | 21.4                    | 21.2        | 21.1       |
|                 |            | 50            | 0         | 24.4                    | 24.5        | 24.5        | 20.4                    | 20.5        | 20.0       |
|                 |            | 50            | 24        | 24.4                    | 24.6        | 24.3        | 20.5                    | 20.3        | 20.1       |
|                 |            | 50            | 49        | 24.4                    | 24.6        | 24.3        | 20.5                    | 20.3        | 20.1       |
|                 |            | 100           | 0         | 24.4                    | 24.6        | 24.3        | 20.4                    | 20.4        | 20.0       |
|                 | 16QAM      | 1             | 0         | 24.7                    | <b>25.1</b> | 25.0        | 20.6                    | <b>20.9</b> | 20.4       |
|                 |            | 1             | 49        | 24.7                    | 24.9        | 24.8        | 20.8                    | 20.8        | 20.5       |
|                 |            | 1             | 99        | 24.8                    | 25.0        | 24.5        | 20.8                    | 20.7        | 20.4       |
|                 |            | 50            | 0         | 23.5                    | 23.6        | 23.5        | 19.4                    | 19.5        | 19.1       |
|                 |            | 50            | 24        | 23.4                    | 23.6        | 23.4        | 19.6                    | 19.4        | 19.1       |
|                 |            | 50            | 49        | 23.4                    | 23.6        | 23.3        | 19.6                    | 19.3        | 19.2       |
|                 |            | 100           | 0         | 23.4                    | 23.6        | 23.3        | 19.5                    | 19.4        | 19.1       |
|                 | 64QAM      | 1             | 0         | 23.5                    | 23.9        | 23.8        | 19.6                    | 19.7        | 19.7       |
|                 |            | 1             | 49        | 23.4                    | 23.9        | <b>23.9</b> | 19.5                    | 19.7        | 19.7       |
|                 |            | 1             | 99        | 23.7                    | <b>23.9</b> | 23.7        | 19.6                    | <b>19.8</b> | 19.7       |
|                 |            | 50            | 0         | 22.4                    | 22.5        | 22.6        | 18.6                    | 18.3        | 18.3       |
|                 |            | 50            | 24        | 22.4                    | 22.6        | 22.5        | 18.5                    | 18.4        | 18.3       |
|                 |            | 50            | 49        | 22.6                    | 22.6        | 22.4        | 18.4                    | 18.5        | 18.4       |
|                 |            | 100           | 0         | 22.4                    | 22.6        | 22.4        | 18.5                    | 18.3        | 18.3       |

## 7.14. LTE BAND 71

|     |       |       |         |
|-----|-------|-------|---------|
| ID: | 19467 | Date: | 2/18/19 |
|-----|-------|-------|---------|

### OUTPUT POWER FOR LTE BAND 71 (5.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 133147                  | 133297    | 133447    | 133147                  | 133297    | 133447    |
|                 |            |               |           | 665.5 MHz               | 680.5 MHz | 695.5 MHz | 665.5 MHz               | 680.5 MHz | 695.5 MHz |
| 5.0             | QPSK       | 1             | 0         | 25.4                    | 25.6      | 25.2      | 23.1                    | 24.0      | 24.1      |
|                 |            | 1             | 12        | 25.5                    | 25.5      | 25.2      | 24.2                    | 24.0      | 24.2      |
|                 |            | 1             | 24        | 25.6                    | 25.4      | 25.2      | 24.2                    | 24.0      | 24.3      |
|                 |            | 12            | 0         | 24.3                    | 24.4      | 24.1      | 23.2                    | 22.9      | 23.1      |
|                 |            | 12            | 6         | 24.4                    | 24.4      | 24.1      | 23.1                    | 22.9      | 22.7      |
|                 |            | 12            | 11        | 24.5                    | 24.3      | 24.1      | 23.1                    | 22.9      | 23.1      |
|                 |            | 25            | 0         | 24.4                    | 24.3      | 24.1      | 23.1                    | 22.9      | 23.2      |
|                 | 16QAM      | 1             | 0         | 24.8                    | 24.9      | 24.7      | 23.7                    | 23.4      | 23.5      |
|                 |            | 1             | 12        | 24.9                    | 24.7      | 24.6      | 23.6                    | 23.4      | 23.7      |
|                 |            | 1             | 24        | 25.0                    | 24.7      | 24.6      | 23.5                    | 23.5      | 23.7      |
|                 |            | 12            | 0         | 23.3                    | 23.4      | 23.1      | 22.2                    | 21.9      | 22.1      |
|                 |            | 12            | 6         | 23.4                    | 23.4      | 23.1      | 22.1                    | 21.9      | 22.1      |
|                 |            | 12            | 11        | 23.4                    | 23.3      | 23.1      | 22.1                    | 21.9      | 22.1      |
|                 |            | 25            | 0         | 23.4                    | 23.3      | 23.1      | 22.1                    | 21.9      | 22.1      |
|                 | 64QAM      | 1             | 0         | 23.8                    | 23.7      | 23.6      | 22.7                    | 22.5      | 22.6      |
|                 |            | 1             | 12        | 23.7                    | 23.7      | 23.7      | 22.7                    | 22.5      | 22.6      |
|                 |            | 1             | 24        | 23.8                    | 23.7      | 23.7      | 22.7                    | 22.4      | 22.7      |
|                 |            | 12            | 0         | 22.4                    | 22.2      | 22.2      | 21.4                    | 21.1      | 21.1      |
|                 |            | 12            | 6         | 22.3                    | 22.2      | 22.2      | 21.4                    | 21.1      | 21.1      |
|                 |            | 12            | 11        | 22.4                    | 22.3      | 22.2      | 21.4                    | 21.0      | 21.2      |
|                 |            | 25            | 0         | 22.3                    | 22.3      | 22.1      | 21.4                    | 21.1      | 21.1      |

### OUTPUT POWER FOR LTE BAND 71 (10.0 MHz)

| Bandwidth (MHz) | Modulation | RB Allocation | RB Offset | Ant 1                   |           |           | Ant 2                   |           |           |
|-----------------|------------|---------------|-----------|-------------------------|-----------|-----------|-------------------------|-----------|-----------|
|                 |            |               |           | Conducted Average (dBm) |           |           | Conducted Average (dBm) |           |           |
|                 |            |               |           | 133172                  | 133297    | 133422    | 133172                  | 133297    | 133422    |
|                 |            |               |           | 668.0 MHz               | 680.5 MHz | 693.0 MHz | 668.0 MHz               | 680.5 MHz | 693.0 MHz |
| 10.0            | QPSK       | 1             | 0         | 25.6                    | 25.7      | 25.3      | 24.5                    | 24.2      | 24.1      |
|                 |            | 1             | 24        | 25.7                    | 25.5      | 25.2      | 24.2                    | 24.0      | 24.2      |
|                 |            | 1             | 49        | 25.5                    | 25.4      | 25.3      | 24.1                    | 24.0      | 24.4      |
|                 |            | 25            | 0         | 24.6                    | 24.6      | 24.2      | 23.2                    | 23.1      | 23.0      |
|                 |            | 25            | 12        | 24.6                    | 24.5      | 24.2      | 23.1                    | 23.1      | 23.1      |
|                 |            | 25            | 24        | 24.5                    | 24.4      | 24.3      | 23.0                    | 23.1      | 23.3      |
|                 |            | 50            | 0         | 24.6                    | 24.5      | 24.3      | 23.1                    | 23.1      | 23.2      |
|                 | 16QAM      | 1             | 0         | 24.9                    | 25.0      | 24.6      | 23.7                    | 23.6      | 23.5      |
|                 |            | 1             | 24        | 25.0                    | 24.8      | 24.6      | 23.5                    | 23.5      | 23.5      |
|                 |            | 1             | 49        | 24.9                    | 24.6      | 24.6      | 23.4                    | 23.4      | 23.7      |
|                 |            | 25            | 0         | 23.6                    | 23.6      | 23.3      | 22.3                    | 22.1      | 22.1      |
|                 |            | 25            | 12        | 23.7                    | 23.5      | 23.2      | 22.2                    | 22.1      | 22.2      |
|                 |            | 25            | 24        | 23.5                    | 23.4      | 23.3      | 22.1                    | 22.1      | 22.3      |
|                 |            | 50            | 0         | 23.6                    | 23.5      | 23.2      | 22.2                    | 22.1      | 22.2      |
|                 | 64QAM      | 1             | 0         | 23.7                    | 23.7      | 23.5      | 22.7                    | 22.8      | 22.7      |
|                 |            | 1             | 24        | 23.9                    | 23.9      | 23.6      | 22.7                    | 22.6      | 22.5      |
|                 |            | 1             | 49        | 23.9                    | 23.8      | 23.6      | 22.6                    | 22.6      | 22.6      |
|                 |            | 25            | 0         | 22.5                    | 22.5      | 22.4      | 21.5                    | 21.4      | 21.3      |
|                 |            | 25            | 12        | 22.6                    | 22.5      | 22.3      | 21.5                    | 21.3      | 21.3      |
|                 |            | 25            | 24        | 22.6                    | 22.5      | 22.4      | 21.4                    | 21.3      | 21.3      |
|                 |            | 50            | 0         | 22.6                    | 22.5      | 22.3      | 21.5                    | 21.3      | 21.3      |

### OUTPUT POWER FOR LTE BAND 71 (15.0 MHz)

| Bandwidth<br>(MHz) | Modulation | RB<br>Allocation | RB Offset | Ant 1                   |             |           | Ant 2                   |           |           |
|--------------------|------------|------------------|-----------|-------------------------|-------------|-----------|-------------------------|-----------|-----------|
|                    |            |                  |           | Conducted Average (dBm) |             |           | Conducted Average (dBm) |           |           |
|                    |            |                  |           | 133197                  | 133297      | 133397    | 133197                  | 133297    | 133397    |
|                    |            |                  |           | 670.5 MHz               | 680.5 MHz   | 690.5 MHz | 670.5 MHz               | 680.5 MHz | 690.5 MHz |
| 15.0               | QPSK       | 1                | 0         | 25.6                    | <b>25.6</b> | 25.3      | <b>24.5</b>             | 24.2      | 24.0      |
|                    |            | 1                | 37        | 25.5                    | 25.4        | 25.3      | 24.1                    | 24.1      | 24.0      |
|                    |            | 1                | 74        | 25.3                    | 25.2        | 25.3      | 24.0                    | 24.0      | 24.4      |
|                    |            | 36               | 0         | 24.6                    | 24.6        | 24.2      | 23.3                    | 23.1      | 22.9      |
|                    |            | 36               | 16        | 24.5                    | 24.5        | 24.2      | 23.1                    | 23.1      | 23.1      |
|                    |            | 36               | 35        | 24.5                    | 24.3        | 24.2      | 23.1                    | 23.0      | 23.2      |
|                    |            | 75               | 0         | 24.4                    | 24.4        | 24.2      | 23.1                    | 23.1      | 23.1      |
|                    | 16QAM      | 1                | 0         | 24.8                    | <b>24.9</b> | 24.6      | <b>23.8</b>             | 23.5      | 23.4      |
|                    |            | 1                | 37        | 24.8                    | 24.8        | 24.7      | 23.4                    | 23.5      | 23.5      |
|                    |            | 1                | 74        | 24.6                    | 24.6        | 24.7      | 23.3                    | 23.5      | 23.7      |
|                    |            | 36               | 0         | 23.7                    | 23.7        | 23.3      | 22.3                    | 22.2      | 22.0      |
|                    |            | 36               | 16        | 23.6                    | 23.5        | 23.3      | 22.2                    | 22.1      | 22.2      |
|                    |            | 36               | 35        | 23.5                    | 23.4        | 23.2      | 22.2                    | 22.1      | 22.3      |
|                    |            | 75               | 0         | 23.5                    | 23.5        | 23.3      | 22.2                    | 22.1      | 22.1      |
|                    | 64QAM      | 1                | 0         | 23.7                    | 23.8        | 23.7      | <b>22.9</b>             | 22.8      | 22.5      |
|                    |            | 1                | 37        | <b>23.9</b>             | <b>23.9</b> | 23.6      | 22.7                    | 22.6      | 22.7      |
|                    |            | 1                | 74        | 23.6                    | 23.6        | 23.6      | 22.8                    | 22.6      | 22.7      |
|                    |            | 36               | 0         | 22.5                    | 22.5        | 22.3      | 21.6                    | 21.5      | 21.3      |
|                    |            | 36               | 16        | 22.6                    | 22.5        | 22.4      | 21.5                    | 21.4      | 21.4      |
|                    |            | 36               | 35        | 22.5                    | 22.6        | 22.4      | 21.4                    | 21.4      | 21.3      |
|                    |            | 75               | 0         | 22.6                    | 22.5        | 22.4      | 21.4                    | 21.4      | 21.4      |

### OUTPUT POWER FOR LTE BAND 71 (20.0 MHz)

| Bandwidth<br>(MHz) | Modulation | RB<br>Allocation | RB Offset | Ant 1                   |             |             | Ant 2                   |           |             |
|--------------------|------------|------------------|-----------|-------------------------|-------------|-------------|-------------------------|-----------|-------------|
|                    |            |                  |           | Conducted Average (dBm) |             |             | Conducted Average (dBm) |           |             |
|                    |            |                  |           | 133222                  | 133297      | 133372      | 133222                  | 133297    | 133372      |
|                    |            |                  |           | 673.0 MHz               | 680.5 MHz   | 688.0 MHz   | 673.0 MHz               | 680.5 MHz | 688.0 MHz   |
| 20.0               | QPSK       | 1                | 0         | 25.5                    | 25.5        | <b>25.6</b> | <b>24.4</b>             | 24.1      | 24.1        |
|                    |            | 1                | 49        | 25.5                    | 25.3        | 25.2        | 24.0                    | 24.1      | 24.0        |
|                    |            | 1                | 99        | 25.4                    | 25.4        | 25.3        | 24.1                    | 24.2      | 24.3        |
|                    |            | 50               | 0         | 24.6                    | 24.2        | 24.3        | 23.1                    | 23.0      | 23.0        |
|                    |            | 50               | 24        | 24.5                    | 24.2        | 24.3        | 23.1                    | 22.9      | 23.1        |
|                    |            | 50               | 49        | 24.4                    | 24.2        | 24.2        | 23.0                    | 23.1      | 23.2        |
|                    |            | 100              | 0         | 24.4                    | 24.2        | 24.3        | 23.1                    | 23.0      | 23.1        |
|                    | 16QAM      | 1                | 0         | 24.9                    | <b>25.0</b> | 24.9        | <b>23.8</b>             | 23.5      | 23.4        |
|                    |            | 1                | 49        | 24.8                    | 24.7        | 24.6        | 23.5                    | 23.5      | 23.4        |
|                    |            | 1                | 99        | 24.8                    | 24.8        | 24.6        | 23.5                    | 23.6      | 23.7        |
|                    |            | 50               | 0         | 23.6                    | 23.3        | 23.4        | 22.1                    | 22.1      | 22.1        |
|                    |            | 50               | 24        | 23.5                    | 23.3        | 23.3        | 22.1                    | 22.0      | 22.1        |
|                    |            | 50               | 49        | 23.4                    | 23.3        | 23.2        | 22.0                    | 22.2      | 22.2        |
|                    |            | 100              | 0         | 23.5                    | 23.3        | 23.3        | 22.1                    | 22.1      | 22.1        |
|                    | 64QAM      | 1                | 0         | 23.7                    | <b>24.0</b> | 24.0        | 22.7                    | 22.8      | 22.7        |
|                    |            | 1                | 49        | 23.6                    | 23.8        | 23.7        | 22.5                    | 22.8      | 22.8        |
|                    |            | 1                | 99        | 23.6                    | 23.7        | 23.8        | 22.6                    | 22.7      | <b>22.8</b> |
|                    |            | 50               | 0         | 22.7                    | 22.4        | 22.5        | 21.5                    | 21.4      | 21.3        |
|                    |            | 50               | 24        | 22.5                    | 22.4        | 22.3        | 21.4                    | 21.4      | 21.4        |
|                    |            | 50               | 49        | 22.4                    | 22.4        | 22.4        | 21.4                    | 21.4      | 21.3        |
|                    |            | 100              | 0         | 22.6                    | 22.4        | 22.3        | 21.4                    | 21.4      | 21.4        |

## **8. CONDUCTED TEST RESULTS**

### **8.1. OCCUPIED BANDWIDTH**

#### **RULE PART(S)**

FCC: §2.1049

#### **LIMITS**

For reporting purposes only.

#### **TEST PROCEDURE**

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the middle channel in each band. The 99% and -26dB bandwidths was also measured and recorded.

#### **MODES TESTED**

- LTE Band 2
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 14
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 30
- LTE Band 41
- LTE Band 48
- LTE Band 66
- LTE Band 71

#### **RESULTS**

There is no limit required and power is the same for low, middle and high channel; therefore, only middle channel was tested.

## LTE BAND 2

| Band       | Mode          | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|------------|---------------|-------------------------|--------|--------------|----------------|
| LTE BAND 2 | 1.4MHz, QPSK  | 6/0                     | 1880.0 | 1.0865       | 1.243          |
|            | 1.4MHz,16QAM  |                         |        | 1.0868       | 1.237          |
|            | 1.4MHz, 64QAM |                         |        | 1.0930       | 1.249          |
|            | 3MHz, QPSK    | 15/0                    |        | 2.6909       | 2.981          |
|            | 3MHz, 16QAM   |                         |        | 2.7011       | 2.975          |
|            | 3MHz, 64QAM   |                         |        | 2.7100       | 2.995          |
|            | 5MHz, QPSK    | 25/0                    |        | 4.4985       | 4.965          |
|            | 5MHz, 16QAM   |                         |        | 4.5041       | 4.958          |
|            | 5MHz, 64QAM   |                         |        | 4.5026       | 4.935          |
|            | 10MHz, QPSK   | 50/0                    |        | 8.9952       | 10.192         |
|            | 10MHz, 16QAM  |                         |        | 8.9979       | 10.276         |
|            | 10MHz, 64QAM  |                         |        | 9.0095       | 10.420         |
|            | 15MHz, QPSK   | 75/0                    |        | 13.4258      | 15.364         |
|            | 15MHz, 16QAM  |                         |        | 13.4201      | 15.258         |
|            | 15MHz, 64QAM  |                         |        | 13.4930      | 15.680         |
|            | 20MHz, QPSK   | 100/0                   |        | 17.9076      | 19.918         |
|            | 20MHz, 16QAM  |                         |        | 17.9329      | 19.927         |
|            | 20MHz, 64QAM  |                         |        | 17.9470      | 19.860         |

## LTE BAND 5

| Band       | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 5 | 1.4MHz, QPSK | 6/0                     | 836.5  | 1.0877       | 1.242          |
|            | 1.4MHz,16QAM |                         |        | 1.0871       | 1.241          |
|            | 1.4MHz 64QAM |                         |        | 1.0910       | 1.246          |
|            | 3MHz, QPSK   | 15/0                    |        | 2.6896       | 2.982          |
|            | 3MHz, 16QAM  |                         |        | 2.6945       | 2.983          |
|            | 3MHz 64QAM   |                         |        | 2.7069       | 2.981          |
|            | 5MHz, QPSK   | 25/0                    |        | 4.5032       | 4.892          |
|            | 5MHz, 16QAM  |                         |        | 4.5114       | 4.945          |
|            | 5MHz 64QAM   |                         |        | 4.5030       | 4.930          |
|            | 10MHz, QPSK  | 50/0                    |        | 8.9929       | 10.313         |
|            | 10MHz, 16QAM |                         |        | 8.9905       | 10.374         |
|            | 10MHz 64QAM  |                         |        | 9.0115       | 10.450         |

### LTE BAND 7

| Band       | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 7 | 5MHz, QPSK   | 25/0                    | 2535.0 | 4.5086       | 4.937          |
|            | 5MHz, 16QAM  |                         |        | 4.5006       | 4.939          |
|            | 5MHz 64QAM   |                         |        | 4.5015       | 4.920          |
|            | 10MHz, QPSK  | 50/0                    |        | 8.9970       | 10.380         |
|            | 10MHz, 16QAM |                         |        | 8.9994       | 10.355         |
|            | 10MHz 64QAM  |                         |        | 9.0091       | 10.360         |
|            | 15MHz, QPSK  | 75/0                    |        | 13.4446      | 15.069         |
|            | 15MHz, 16QAM |                         |        | 13.4612      | 15.345         |
|            | 15MHz 64QAM  |                         |        | 13.4670      | 15.350         |
|            | 20MHz, QPSK  | 100/0                   |        | 17.8649      | 19.638         |
|            | 20MHz, 16QAM |                         |        | 17.9428      | 19.882         |
|            | 20MHz 64QAM  |                         |        | 17.9350      | 20.010         |

### LTE BAND 12

| Band        | Mode          | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|---------------|-------------------------|--------|--------------|----------------|
| LTE BAND 12 | 1.4 MHz, QPSK | 6/0                     | 707.5  | 1.0855       | 1.241          |
|             | 1.4 MHz,16QAM |                         |        | 1.0915       | 1.243          |
|             | 1.4 MHz 64QAM |                         |        | 1.0988       | 1.245          |
|             | 3 MHz, QPSK   | 15/0                    |        | 2.6875       | 2.977          |
|             | 3 MHz, 16QAM  |                         |        | 2.7031       | 2.992          |
|             | 3 MHz 64QAM   |                         |        | 2.7066       | 2.989          |
|             | 5 MHz, QPSK   | 25/0                    |        | 4.4946       | 4.933          |
|             | 5 MHz, 16QAM  |                         |        | 4.4938       | 4.942          |
|             | 5 MHz 64QAM   |                         |        | 4.4969       | 4.944          |
|             | 10 MHz, QPSK  | 50/0                    |        | 8.9972       | 10.358         |
|             | 10 MHz, 16QAM |                         |        | 8.9986       | 10.415         |
|             | 10 MHz 64QAM  |                         |        | 9.0123       | 10.440         |

### LTE BAND 13

| Band        | Mode          | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|---------------|-------------------------|--------|--------------|----------------|
| LTE BAND 13 | 5 MHz, QPSK   | 25/0                    | 782.0  | 4.4795       | 4.804          |
|             | 5 MHz, 16QAM  |                         |        | 4.5052       | 4.913          |
|             | 5 MHz 64QAM   |                         |        | 4.4982       | 4.929          |
|             | 10 MHz, QPSK  | 50/0                    |        | 8.9736       | 10.155         |
|             | 10 MHz, 16QAM |                         |        | 8.9745       | 10.170         |
|             | 10 MHz 64QAM  |                         |        | 8.9908       | 10.250         |

### LTE BAND 14

| Band        | Mode          | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|---------------|-------------------------|--------|--------------|----------------|
| LTE BAND 14 | 5 MHz, QPSK   | 25/0                    | 793.0  | 4.4819       | 4.885          |
|             | 5 MHz, 16QAM  |                         |        | 4.4805       | 4.886          |
|             | 5M Hz 64QAM   |                         |        | 4.5002       | 4.935          |
|             | 10 MHz, QPSK  | 50/0                    |        | 9.0092       | 10.371         |
|             | 10 MHz, 16QAM |                         |        | 8.9904       | 10.307         |
|             | 10 MHz 64QAM  |                         |        | 9.0079       | 10.330         |

### LTE BAND 17

| Band        | Mode          | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|---------------|-------------------------|--------|--------------|----------------|
| LTE BAND 17 | 5 MHz, QPSK   | 25/0                    | 710.0  | 4.5070       | 4.961          |
|             | 5 MHz, 16QAM  |                         |        | 4.5122       | 4.956          |
|             | 5 MHz 64QAM   |                         |        | 4.4966       | 4.936          |
|             | 10 MHz, QPSK  | 50/0                    |        | 8.9922       | 10.272         |
|             | 10 MHz, 16QAM |                         |        | 9.0141       | 10.267         |
|             | 10 MHz 64QAM  |                         |        | 9.0144       | 10.430         |

### LTE BAND 25

| Band        | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 25 | 1.4MHz, QPSK | 6/0                     | 1882.5 | 1.0889       | 1.243          |
|             | 1.4MHz,16QAM |                         |        | 1.0843       | 1.244          |
|             | 1.4MHz 64QAM |                         |        | 1.0927       | 1.245          |
|             | 3MHz, QPSK   | 15/0                    |        | 2.6956       | 2.976          |
|             | 3MHz, 16QAM  |                         |        | 2.6902       | 2.987          |
|             | 3MHz 64QAM   |                         |        | 2.7057       | 2.982          |
|             | 5MHz, QPSK   | 25/0                    |        | 4.5063       | 4.904          |
|             | 5MHz, 16QAM  |                         |        | 4.4929       | 4.948          |
|             | 5MHz 64QAM   |                         |        | 4.5009       | 4.937          |
|             | 10MHz, QPSK  | 50/0                    |        | 8.9927       | 10.312         |
|             | 10MHz, 16QAM |                         |        | 8.9897       | 10.509         |
|             | 10MHz 64QAM  |                         |        | 9.0269       | 10.480         |
|             | 15MHz, QPSK  | 75/0                    |        | 13.4538      | 15.285         |
|             | 15MHz, 16QAM |                         |        | 13.4654      | 15.281         |
|             | 15MHz 64QAM  |                         |        | 13.4980      | 15.400         |
|             | 20MHz, QPSK  | 100/0                   |        | 17.9135      | 19.551         |
|             | 20MHz, 16QAM |                         |        | 17.9003      | 20.049         |
|             | 20MHz 64QAM  |                         |        | 17.9680      | 20.240         |

### LTE BAND 26

| Band        | Mode          | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|---------------|-------------------------|--------|--------------|----------------|
| LTE BAND 26 | 1.4 MHz, QPSK | 1/0                     | 819.0  | 0.3394       | 0.458          |
|             | 1.4 MHz,16QAM |                         |        | 0.2568       | 0.355          |
|             | 1.4 MHz, QPSK | 6/0                     |        | 1.0923       | 1.245          |
|             | 1.4 MHz,16QAM |                         |        | 1.0905       | 1.238          |
|             | 1.4 MHz 64QAM |                         |        | 1.0946       | 1.245          |
|             | 3 MHz, QPSK   | 1/0                     |        | 0.2395       | 0.356          |
|             | 3 MHz, 16QAM  |                         |        | 0.2671       | 0.379          |
|             | 3 MHz, QPSK   | 15/0                    |        | 2.6906       | 2.982          |
|             | 3 MHz, 16QAM  |                         |        | 2.6880       | 2.996          |
|             | 3 MHz 64QAM   |                         |        | 2.7051       | 2.984          |
|             | 5 MHz, QPSK   | 1/0                     |        | 0.2301       | 0.395          |
|             | 5 MHz, 16QAM  |                         |        | 0.2300       | 0.405          |
|             | 5 MHz, QPSK   | 25/0                    |        | 4.5036       | 4.928          |
|             | 5 MHz, 16QAM  |                         |        | 4.4971       | 4.925          |
|             | 5 MHz 64QAM   |                         |        | 4.4946       | 4.943          |
|             | 10 MHz, QPSK  | 1/0                     |        | 0.2729       | 0.426          |
|             | 10 MHz, 16QAM |                         |        | 0.2652       | 0.406          |
|             | 10 MHz, QPSK  | 50/0                    |        | 9.0103       | 10.313         |
|             | 10 MHz, 16QAM |                         |        | 8.9786       | 10.249         |
|             | 10 MHz 64QAM  |                         |        | 9.0102       | 10.430         |

### LTE BAND 30

| Band        | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 30 | 5MHz, QPSK   | 25/0                    | 2310.0 | 4.5111       | 4.915          |
|             | 5MHz, 16QAM  |                         |        | 4.5004       | 4.943          |
|             | 5MHz 64QAM   |                         |        | 4.4960       | 4.908          |
|             | 10MHz, QPSK  | 50/0                    |        | 9.0047       | 10.400         |
|             | 10MHz, 16QAM |                         |        | 9.0305       | 10.470         |
|             | 10MHz 64QAM  |                         |        | 9.0154       | 10.400         |

### LTE BAND 41

| Band        | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 41 | 5MHz, QPSK   | 25/0                    | 2593.0 | 4.4754       | 4.647          |
|             | 5MHz, 16QAM  |                         |        | 4.4693       | 4.875          |
|             | 5MHz 64QAM   |                         |        | 4.4868       | 4.881          |
|             | 10MHz, QPSK  | 50/0                    |        | 8.9563       | 11.685         |
|             | 10MHz, 16QAM |                         |        | 8.9097       | 11.613         |
|             | 10MHz 64QAM  |                         |        | 8.9948       | 11.880         |
|             | 15MHz, QPSK  | 75/0                    |        | 13.4145      | 14.745         |
|             | 15MHz, 16QAM |                         |        | 13.3262      | 17.427         |
|             | 15MHz 64QAM  |                         |        | 13.4650      | 16.830         |
|             | 20MHz, QPSK  | 100/0                   |        | 17.9051      | 23.151         |
|             | 20MHz, 16QAM |                         |        | 17.8989      | 25.391         |
|             | 20MHz 64QAM  |                         |        | 17.9240      | 24.390         |

### **LTE BAND 48**

| Band        | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 48 | 5MHz, QPSK   | 25/0                    | 3625.0 | 4.4669       | 4.977          |
|             | 5MHz, 16QAM  |                         |        | 4.4824       | 4.953          |
|             | 5MHz 64QAM   |                         |        | 4.4889       | 4.795          |
|             | 10MHz, QPSK  | 50/0                    |        | 8.9598       | 10.062         |
|             | 10MHz, 16QAM |                         |        | 8.9265       | 9.821          |
|             | 10MHz 64QAM  |                         |        | 8.9532       | 10.050         |
|             | 15MHz, QPSK  | 75/0                    |        | 13.3942      | 14.647         |
|             | 15MHz, 16QAM |                         |        | 13.4321      | 14.673         |
|             | 15MHz 64QAM  |                         |        | 13.4340      | 14.820         |
|             | 20MHz, QPSK  | 100/0                   |        | 17.8996      | 18.672         |
|             | 20MHz, 16QAM |                         |        | 17.9286      | 19.132         |
|             | 20MHz 64QAM  |                         |        | 17.8820      | 18.920         |

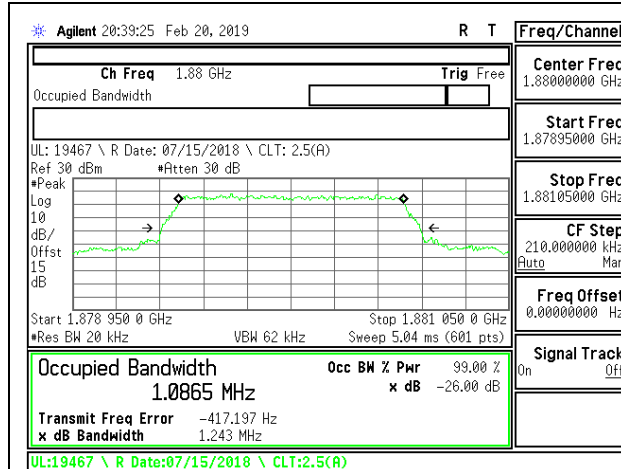
### **LTE BAND 66**

| Band        | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 66 | 1.4MHz, QPSK | 6/0                     | 1745.0 | 1.0841       | 1.239          |
|             | 1.4MHz,16QAM |                         |        | 1.0886       | 1.242          |
|             | 1.4MHz 64QAM |                         |        | 1.0928       | 1.246          |
|             | 3MHz, QPSK   | 15/0                    |        | 2.7010       | 2.993          |
|             | 3MHz, 16QAM  |                         |        | 2.6862       | 2.984          |
|             | 3MHz 64QAM   |                         |        | 2.6986       | 2.988          |
|             | 5MHz, QPSK   | 25/0                    |        | 4.5102       | 4.878          |
|             | 5MHz, 16QAM  |                         |        | 4.4995       | 4.944          |
|             | 5MHz 64QAM   |                         |        | 4.4946       | 4.930          |
|             | 10MHz, QPSK  | 50/0                    |        | 8.9706       | 10.417         |
|             | 10MHz, 16QAM |                         |        | 8.9877       | 10.324         |
|             | 10MHz 64QAM  |                         |        | 8.9978       | 10.370         |
|             | 15MHz, QPSK  | 75/0                    |        | 13.4410      | 15.339         |
|             | 15MHz, 16QAM |                         |        | 13.4456      | 15.077         |
|             | 15MHz 64QAM  |                         |        | 13.4770      | 15.430         |
|             | 20MHz, QPSK  | 100/0                   |        | 17.8726      | 19.729         |
|             | 20MHz, 16QAM |                         |        | 17.9229      | 19.994         |
|             | 20MHz 64QAM  |                         |        | 17.9400      | 19.720         |

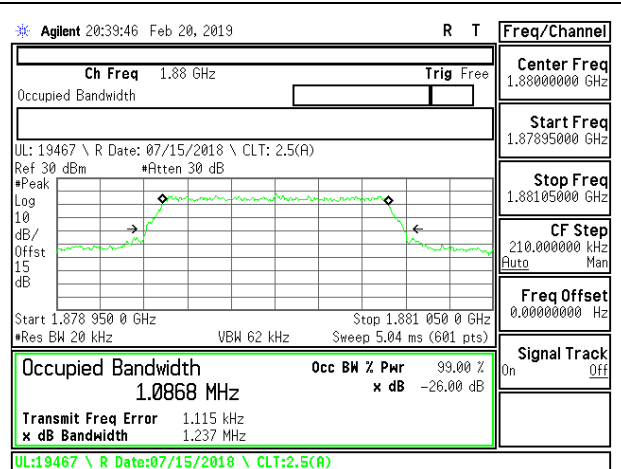
**LTE BAND 71**

| Band        | Mode         | RB Allocation/RB Offset | f(MHz) | 99% BW (MHz) | -26dB BW (MHz) |
|-------------|--------------|-------------------------|--------|--------------|----------------|
| LTE BAND 71 | 5MHz, QPSK   | 1/0                     | 680.5  | 0.267        | 0.445          |
|             | 5MHz, 16QAM  |                         |        | 0.268        | 0.426          |
|             | 5MHz, QPSK   | 25/0                    |        | 4.4869       | 4.878          |
|             | 5MHz, 16QAM  |                         |        | 4.4931       | 4.904          |
|             | 5MHz 64QAM   |                         |        | 4.4934       | 4.928          |
|             | 10MHz, QPSK  | 1/0                     |        | 0.573        | 0.668          |
|             | 10MHz, 16QAM |                         |        | 0.676        | 0.770          |
|             | 10MHz, QPSK  | 50/0                    |        | 8.9796       | 10.306         |
|             | 10MHz, 16QAM |                         |        | 8.9823       | 10.401         |
|             | 10MHz 64QAM  |                         |        | 9.0207       | 10.430         |
|             | 15MHz, QPSK  | 1/0                     |        | 0.660        | 0.768          |
|             | 15MHz, 16QAM |                         |        | 0.790        | 0.982          |
|             | 15MHz, QPSK  | 75/0                    |        | 13.4331      | 15.098         |
|             | 15MHz, 16QAM |                         |        | 13.4402      | 15.222         |
|             | 15MHz 64QAM  |                         |        | 13.4760      | 15.330         |
|             | 20MHz, QPSK  | 1/0                     |        | 0.820        | 1.113          |
|             | 20MHz, 16QAM |                         |        | 0.837        | 1.135          |
|             | 20MHz, QPSK  | 100/0                   |        | 17.9027      | 19.665         |
|             | 20MHz, 16QAM |                         |        | 17.8337      | 19.578         |
|             | 20MHz 64QAM  |                         |        | 17.9100      | 19.900         |

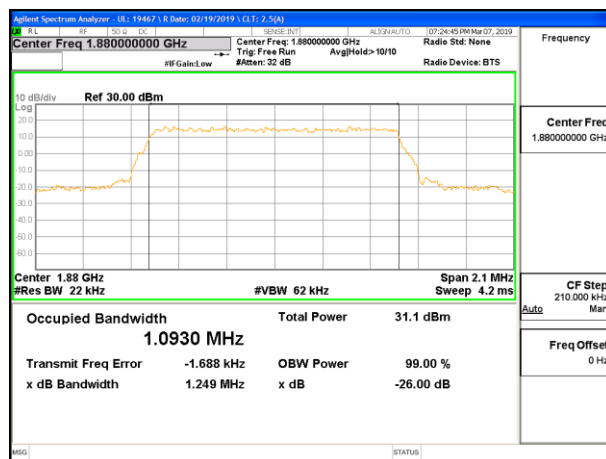
## 8.1.1. LTE BAND 2



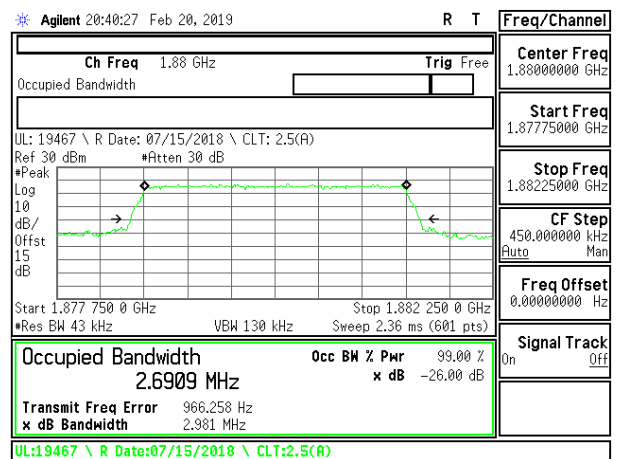
LTE B2 1.4MHz QPSK Middle Channel RB6-0



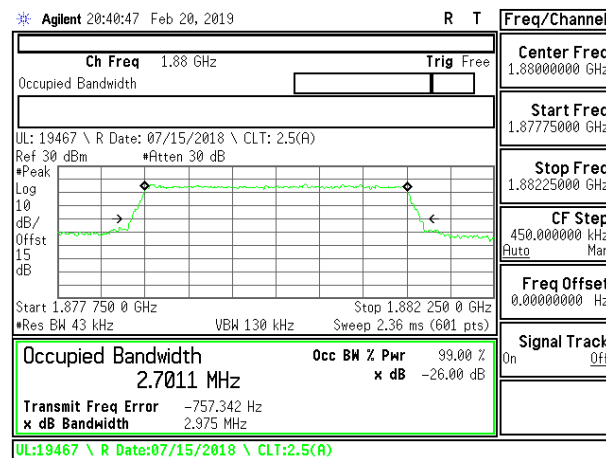
LTE B2 1.4MHz 16QAM Middle Channel RB6-0



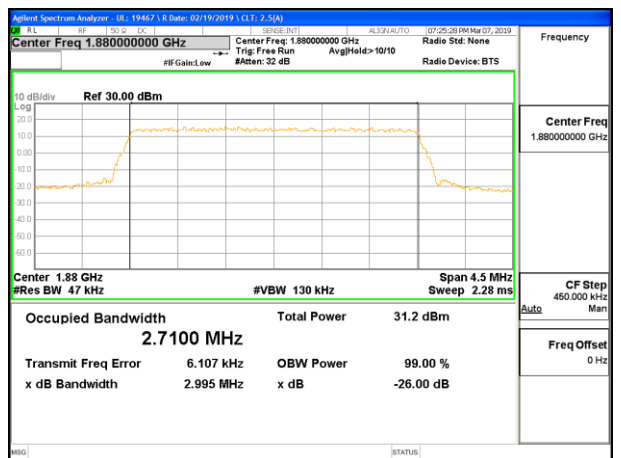
LTE B2 1.4MHz 64QAM Middle Channel RB6-0



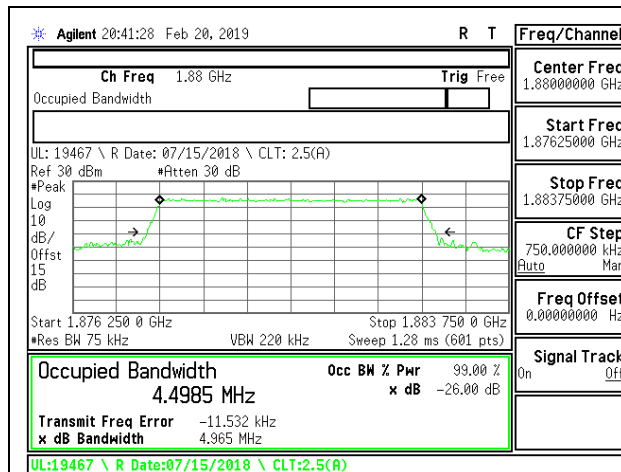
LTE B2 3MHz QPSK Middle Channel RB15-0



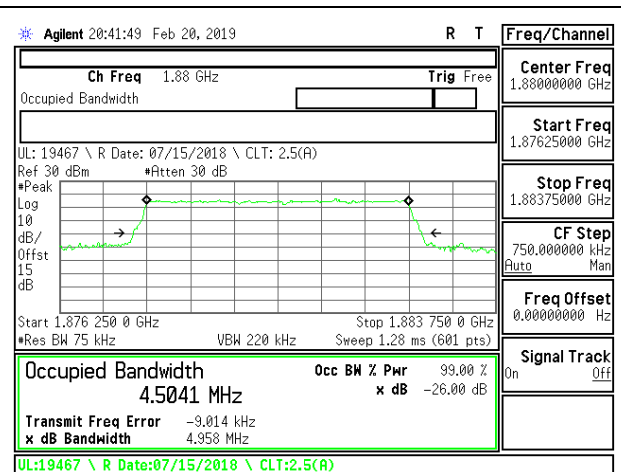
LTE B2 3MHz 16QAM Middle Channel RB15-0



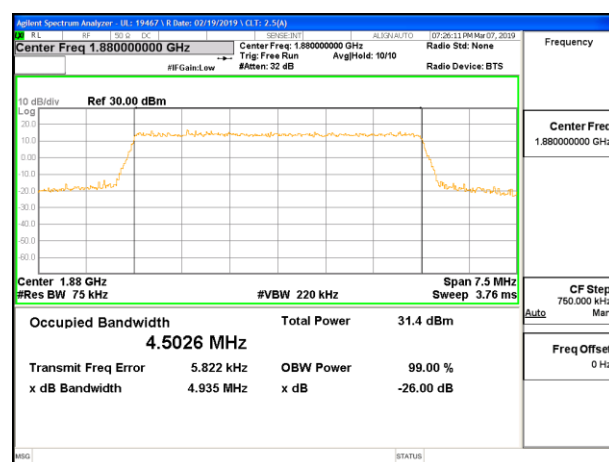
LTE B2 3MHz 64QAM Middle Channel RB15-0



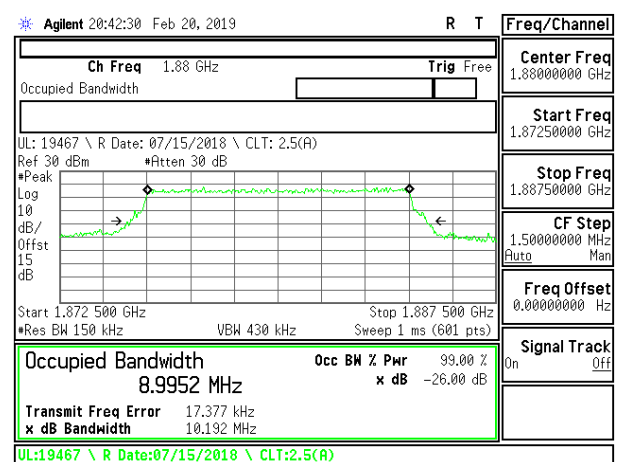
LTE B2 5MHz QPSK Middle Channel RB25-0



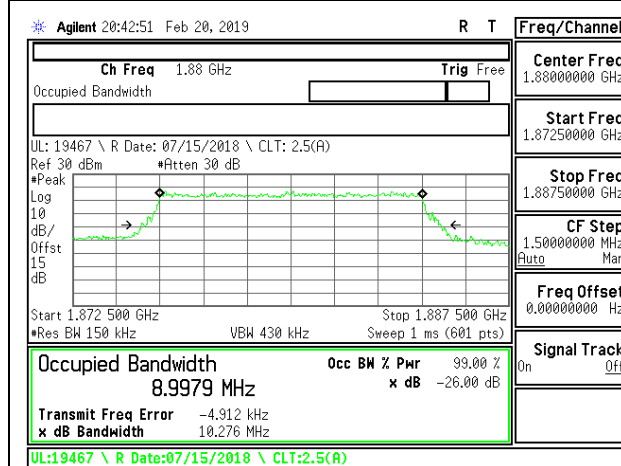
LTE B2 5MHz 16QAM Middle Channel RB25-0



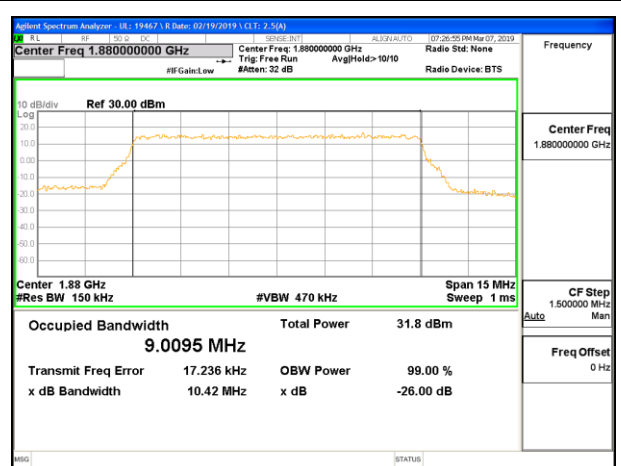
LTE B2 5MHz 64QAM Middle Channel RB25-0



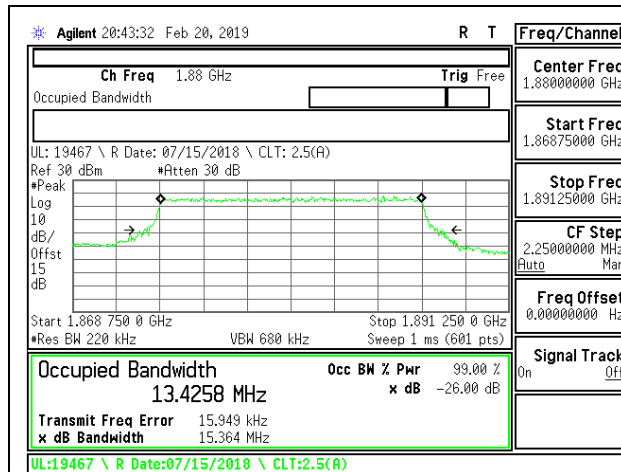
LTE B2 10MHz QPSK Middle Channel RB50-0



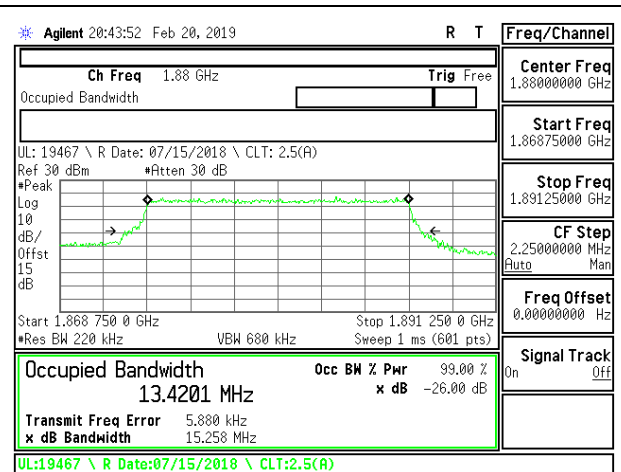
LTE B2 10MHz 16QAM Middle Channel RB50-0



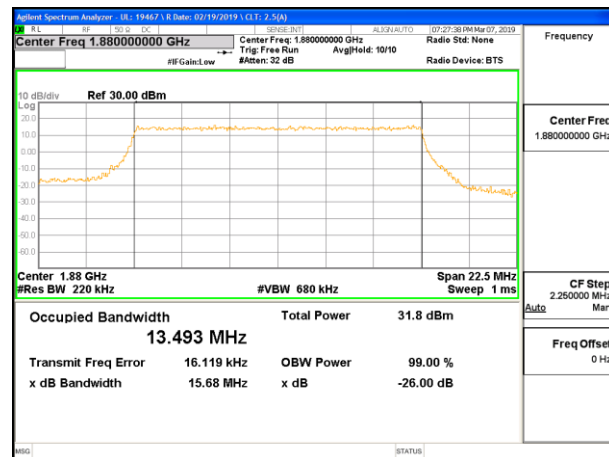
LTE B2 10MHz 64QAM Middle Channel RB50-0



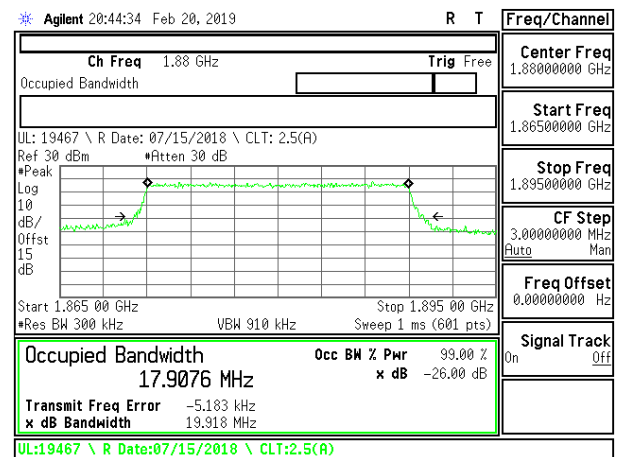
LTE B2 15MHz QPSK Middle Channel RB75-0



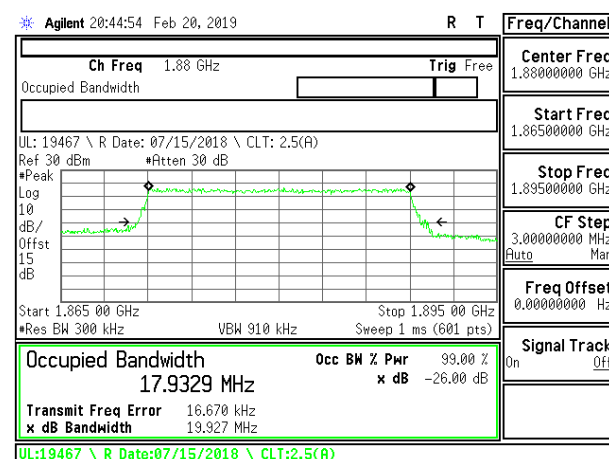
LTE B2 15MHz 16QAM Middle Channel RB75-0



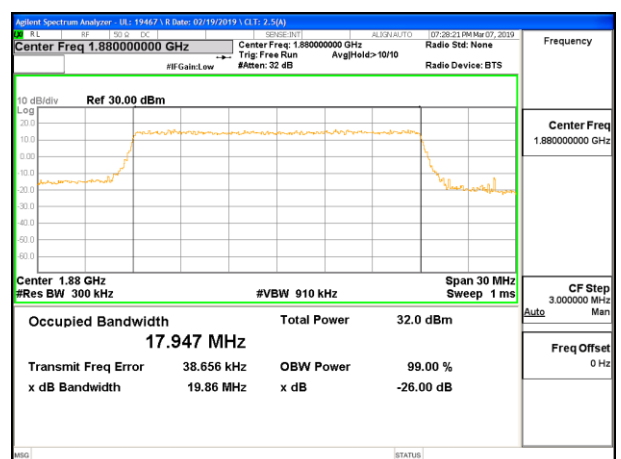
LTE B2 15MHz 64QAM Middle Channel RB75-0



LTE B2 20MHz QPSK Middle Channel RB100-0

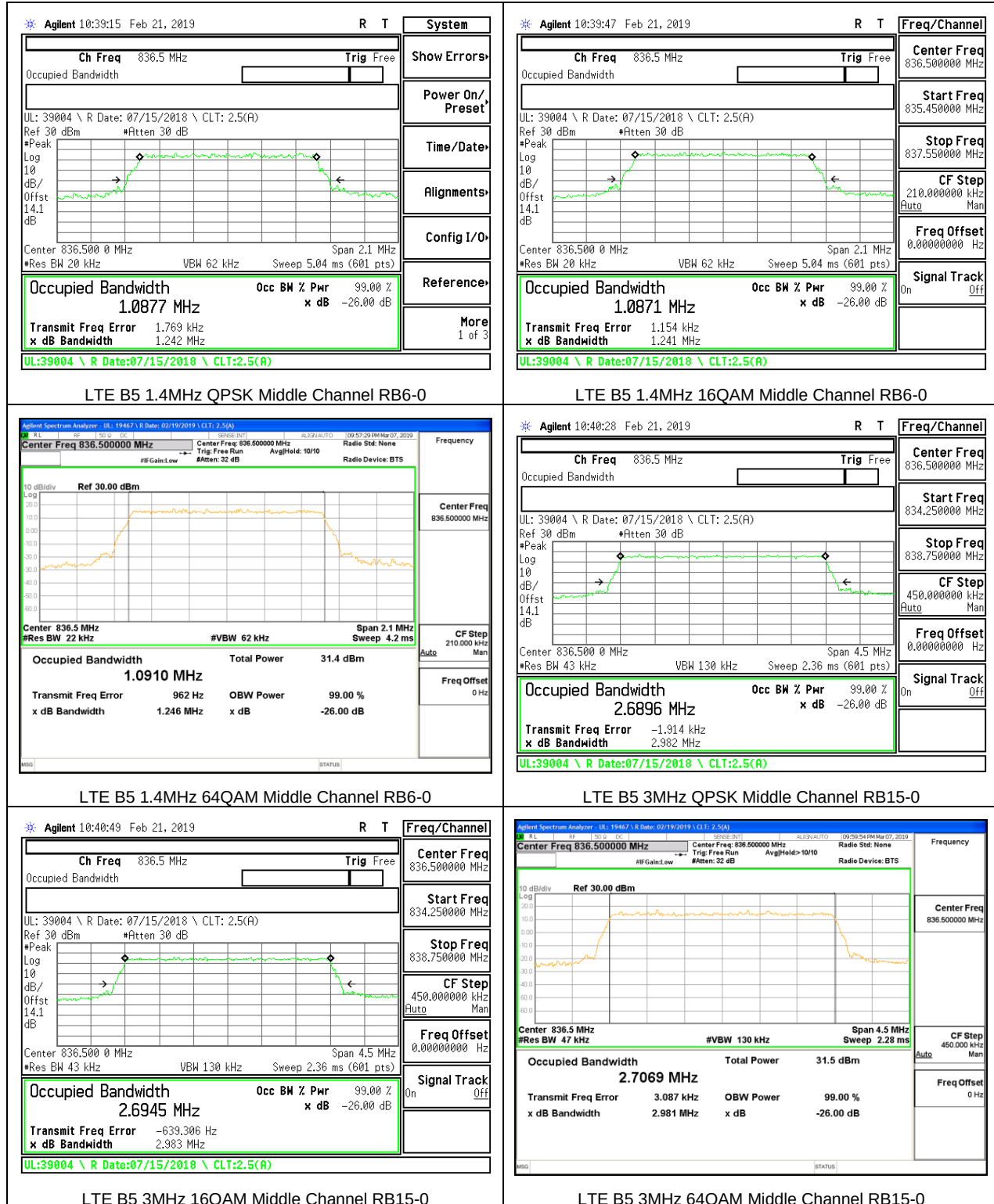


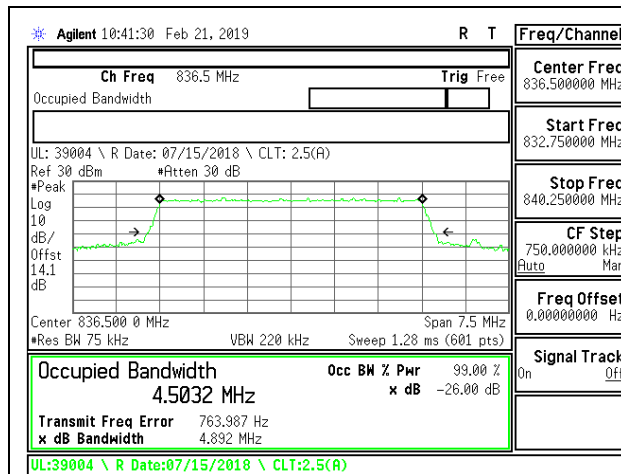
LTE B2 20MHz 16QAM Middle Channel RB100-0



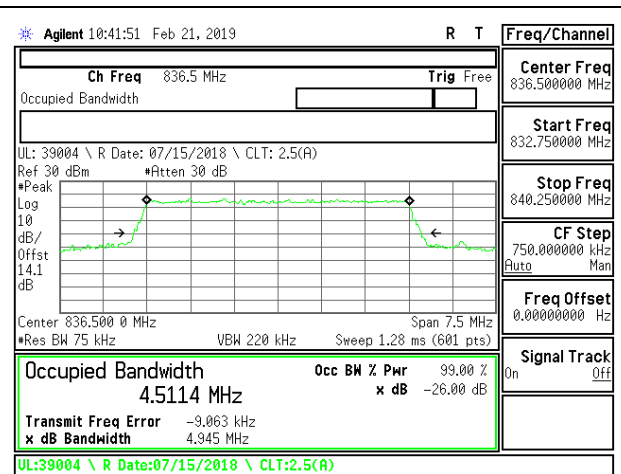
LTE B2 20MHz 64QAM Middle Channel RB100-0

## 8.1.2. LTE BAND 5

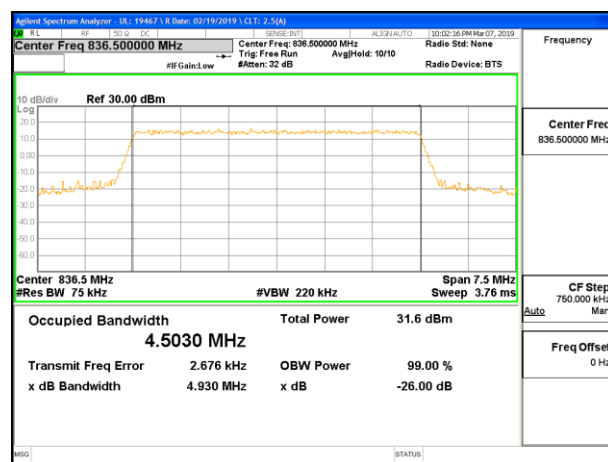




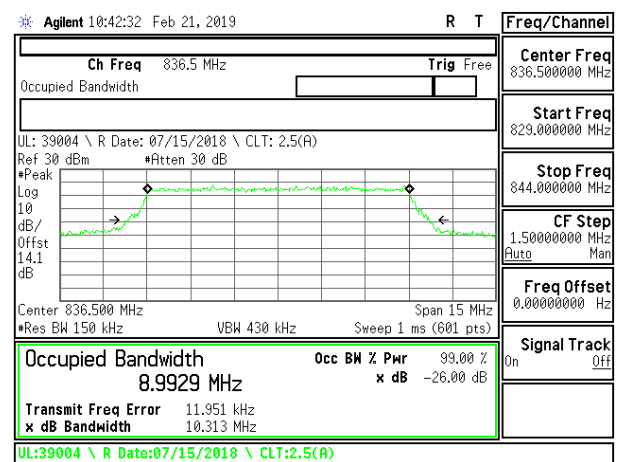
LTE B5 5MHz QPSK Middle Channel RB25-0



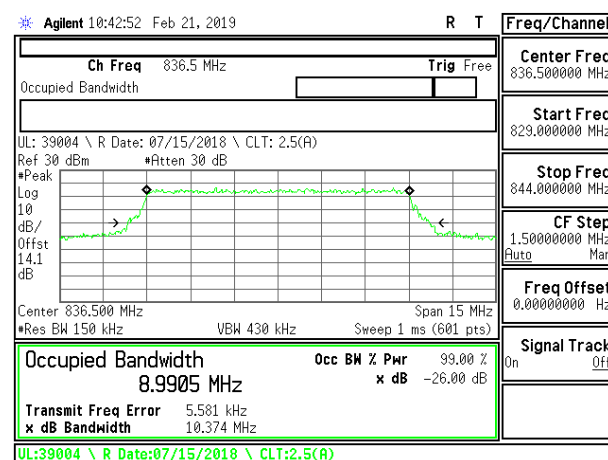
LTE B5 5MHz 16QAM Middle Channel RB25-0



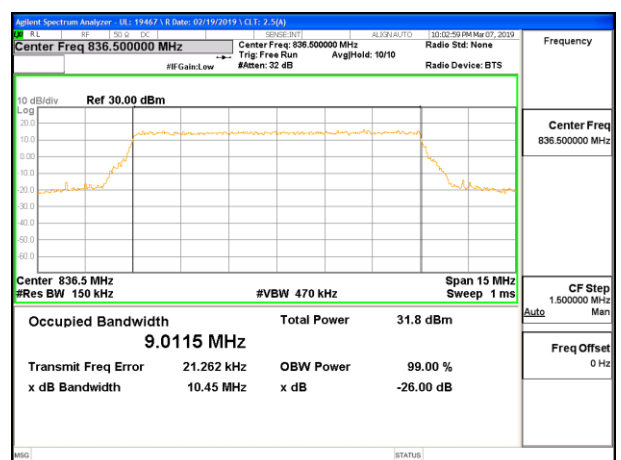
LTE B5 5MHz 64QAM Middle Channel RB25-0



LTE B5 10MHz QPSK Middle Channel RB50-0

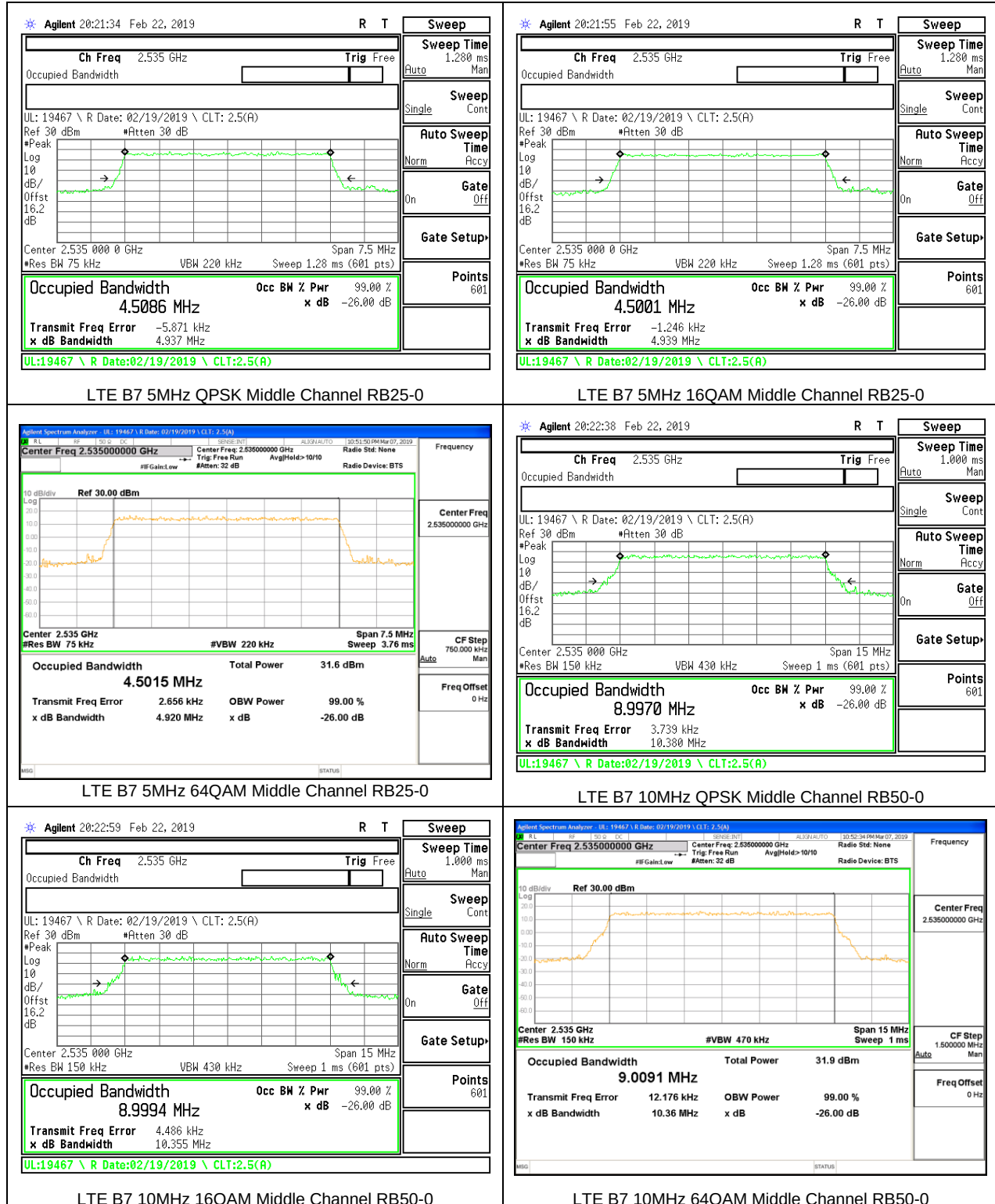


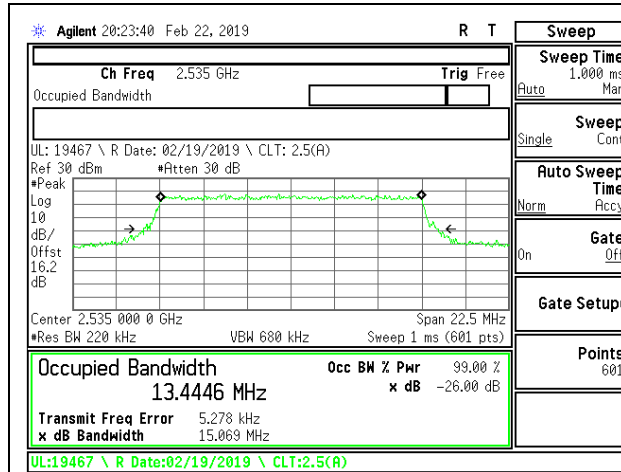
LTE B5 10MHz 16QAM Middle Channel RB50-0



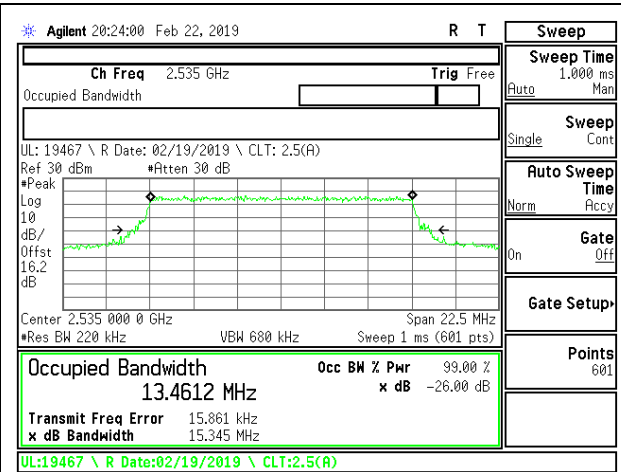
LTE B5 10MHz 64QAM Middle Channel RB50-0

### 8.1.3. LTE BAND 7

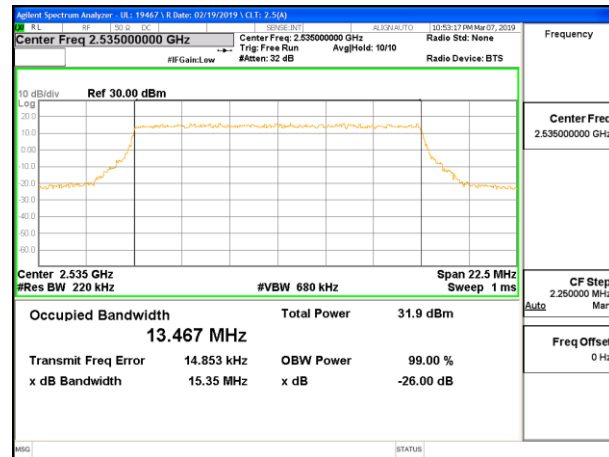




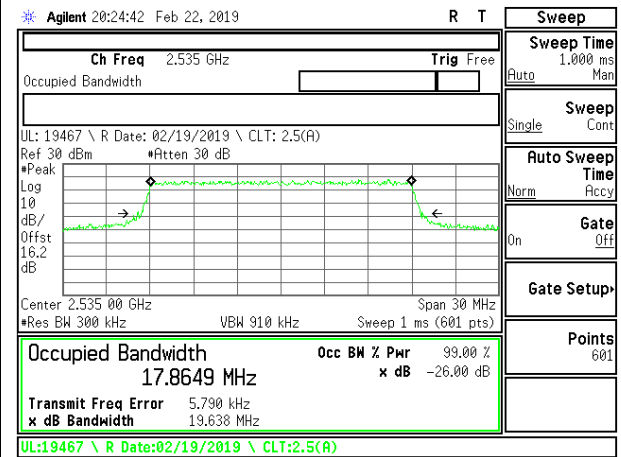
LTE B7 15MHz QPSK Middle Channel RB75-0



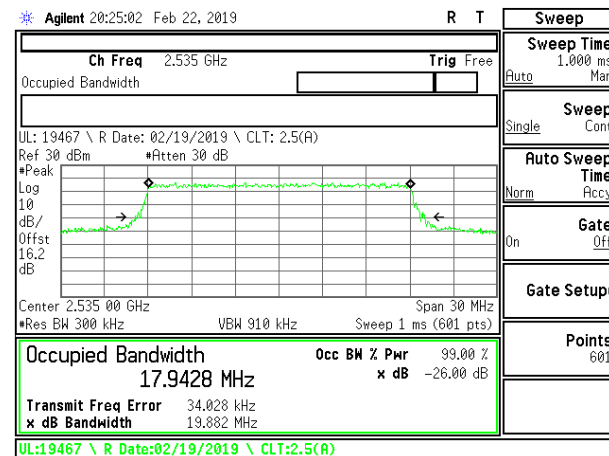
LTE B7 15MHz 16QAM Middle Channel RB75-0



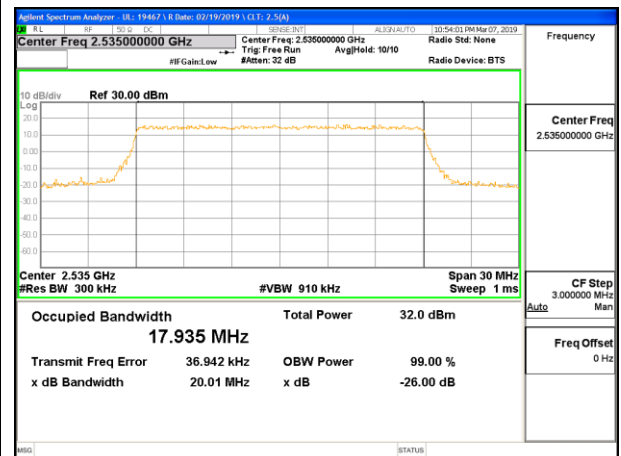
LTE B7 15MHz 64QAM Middle Channel RB75-0



LTE B7 20MHz QPSK Middle Channel RB100-0

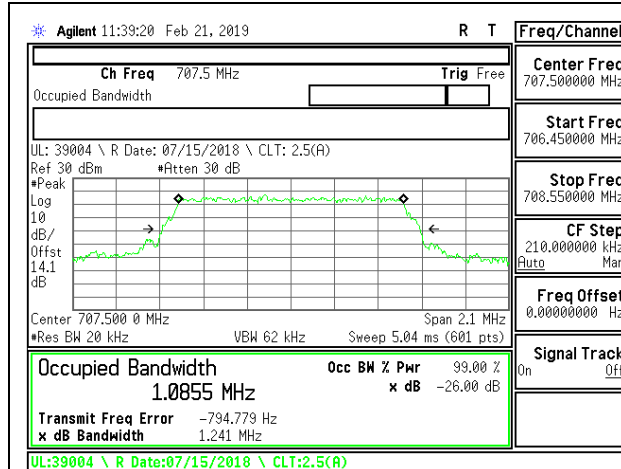


LTE B7 20MHz 16QAM Middle Channel RB100-0

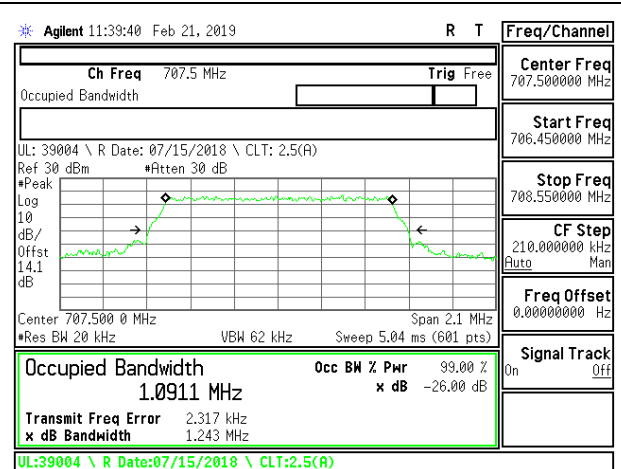


LTE B7 20MHz 64QAM Middle Channel RB100-0

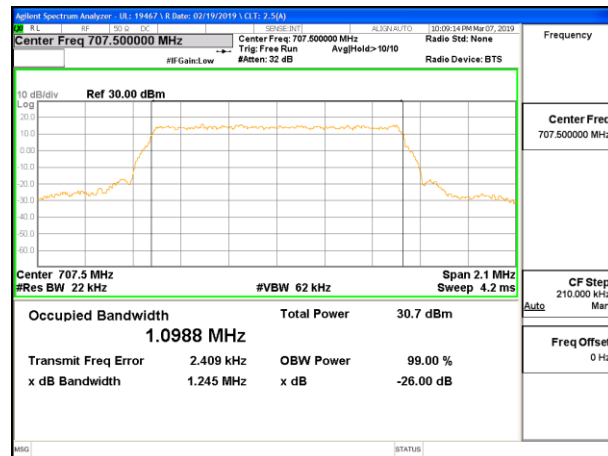
## 8.1.4. LTE BAND 12



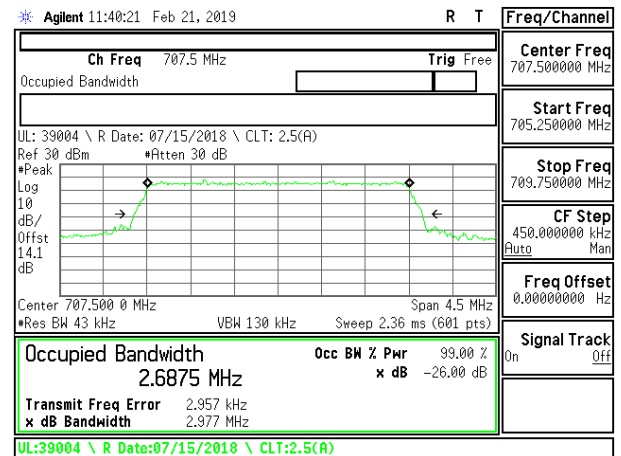
LTE B12 1.4MHz QPSK Middle Channel RB6-0



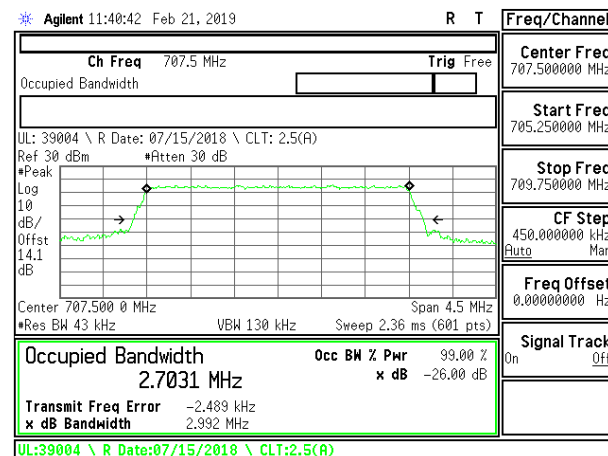
LTE B12 1.4MHz 16QAM Middle Channel RB6-0



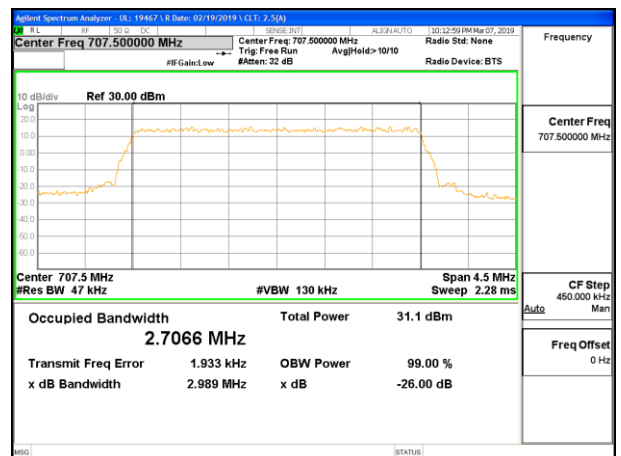
LTE B12 1.4MHz 64QAM Middle Channel RB6-0



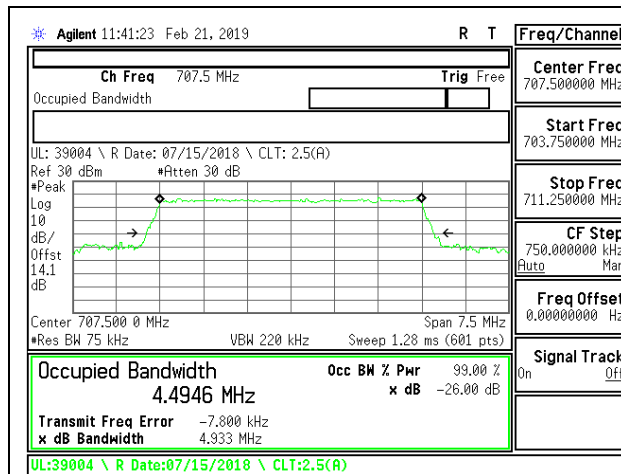
LTE B12 3MHz QPSK Middle Channel RB15-0



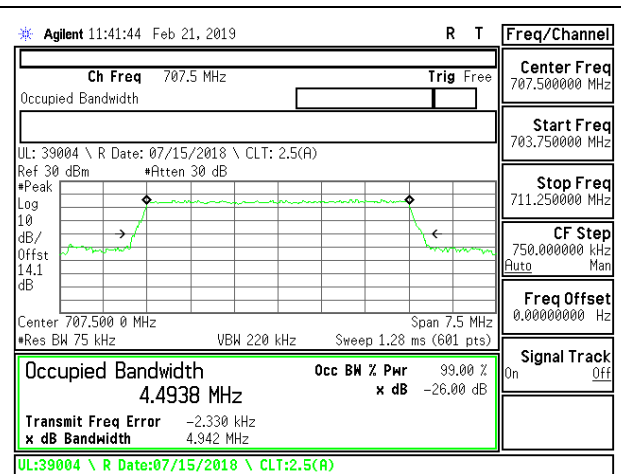
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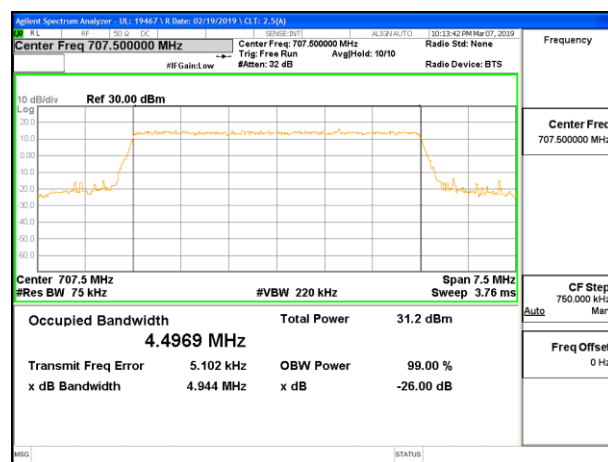
LTE B12 3MHz 64QAM Middle Channel RB15-0



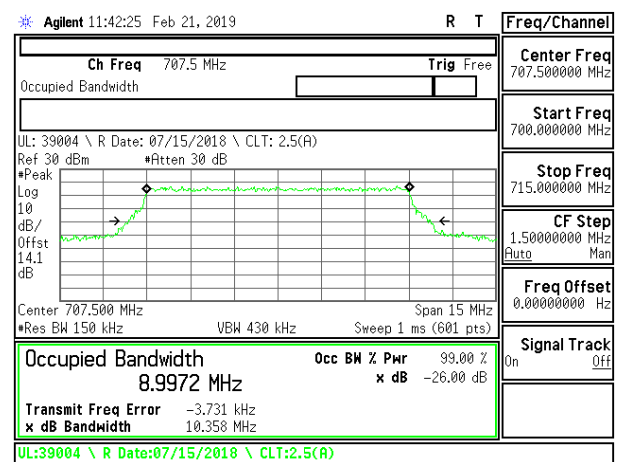
LTE B12 5MHz QPSK Middle Channel RB25-0



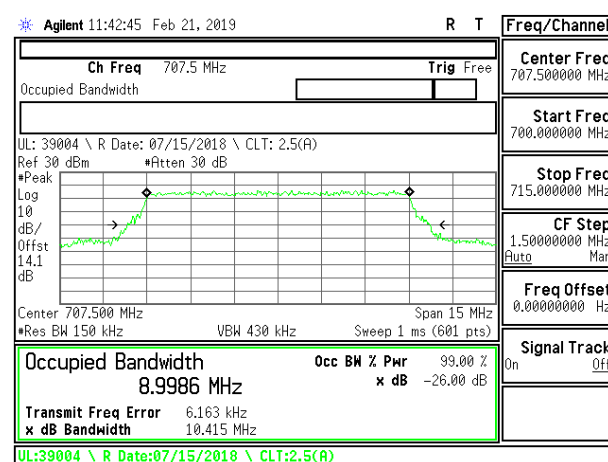
LTE B12 5MHz 16QAM Middle Channel RB25-0



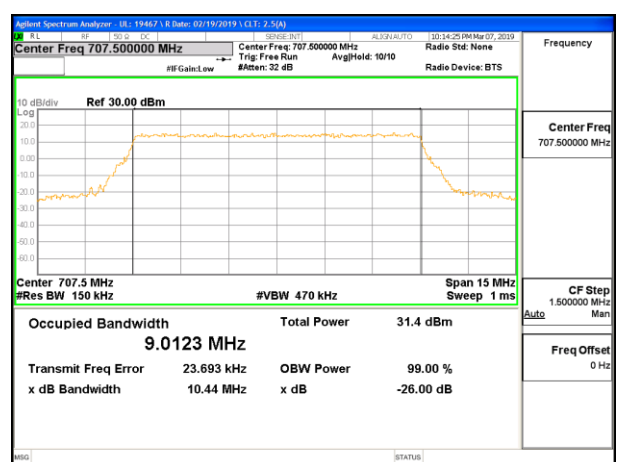
LTE B12 5MHz 64QAM Middle Channel RB25-0



LTE B12 10MHz QPSK Middle Channel RB50-0

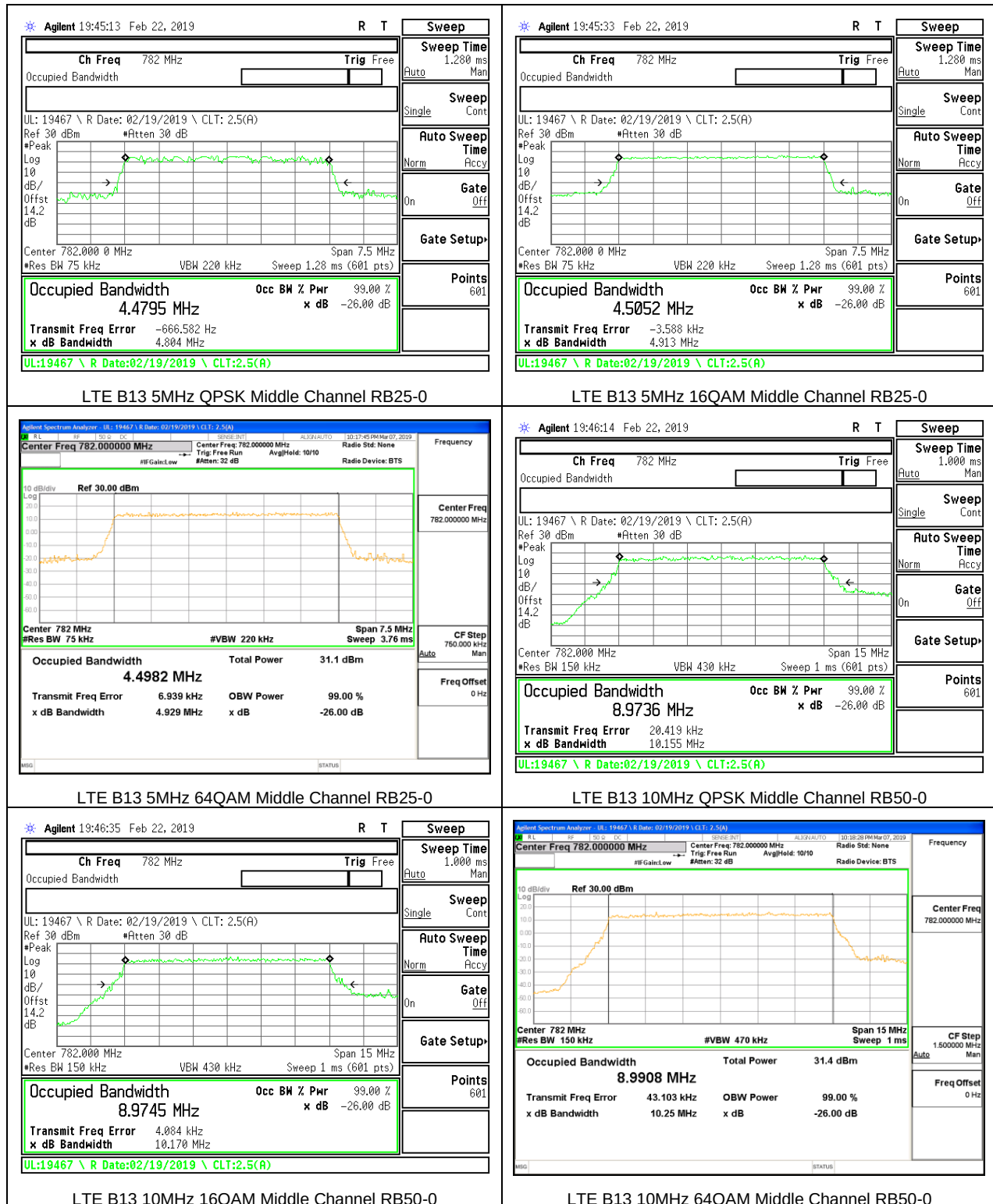


LTE B12 10MHz 16QAM Middle Channel RB50-0

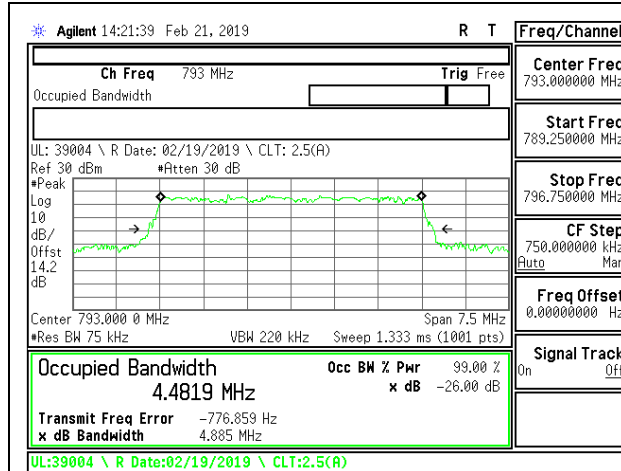


LTE B12 10MHz 64QAM Middle Channel RB50-0

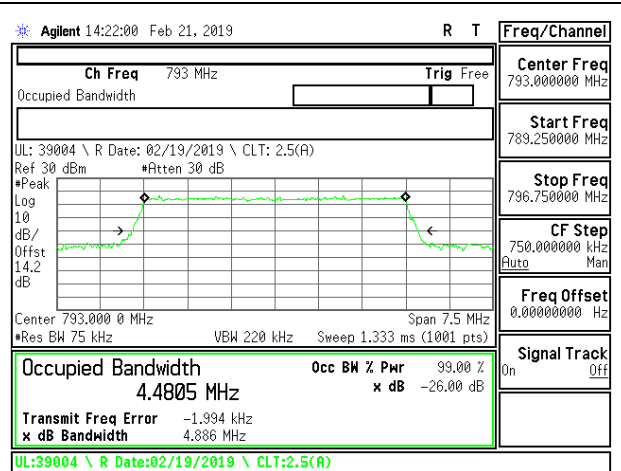
## 8.1.5. LTE BAND 13



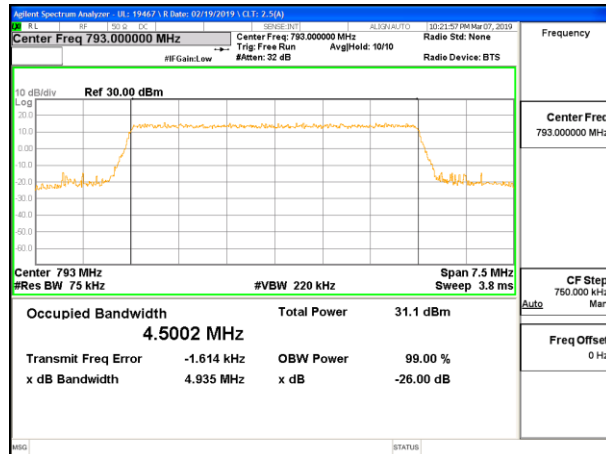
## 8.1.6. LTE BAND 14



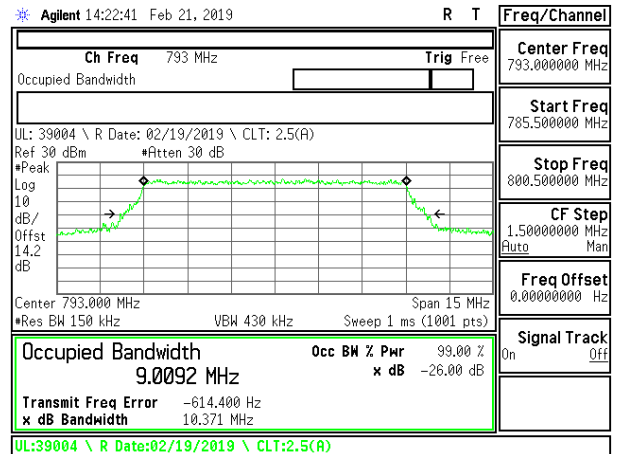
LTE B14 5MHz QPSK Middle Channel RB25-0



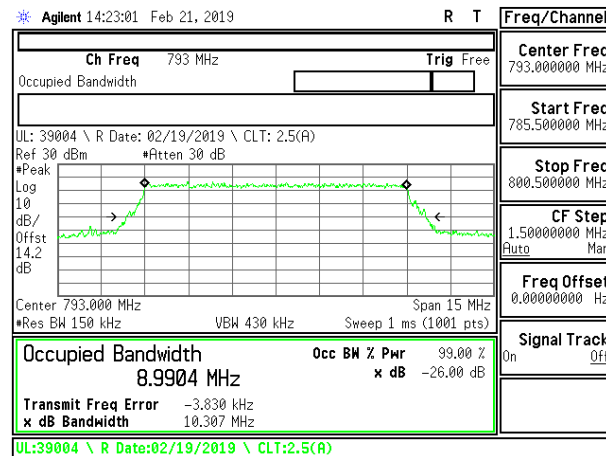
LTE B14 5MHz 16QAM Middle Channel RB25-0



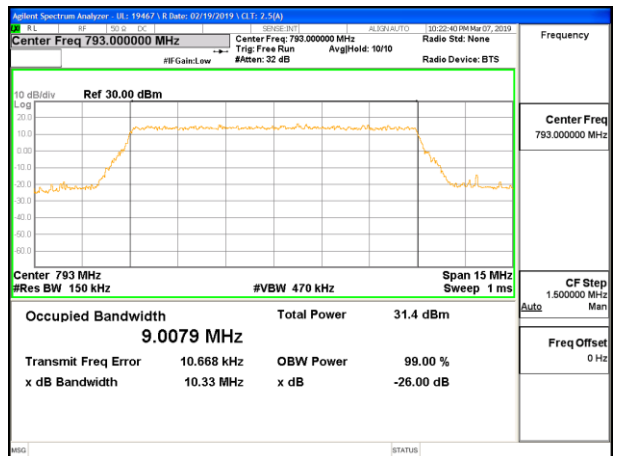
LTE B14 5MHz 64QAM Middle Channel RB25-0



LTE B14 10MHz QPSK Middle Channel RB50-0

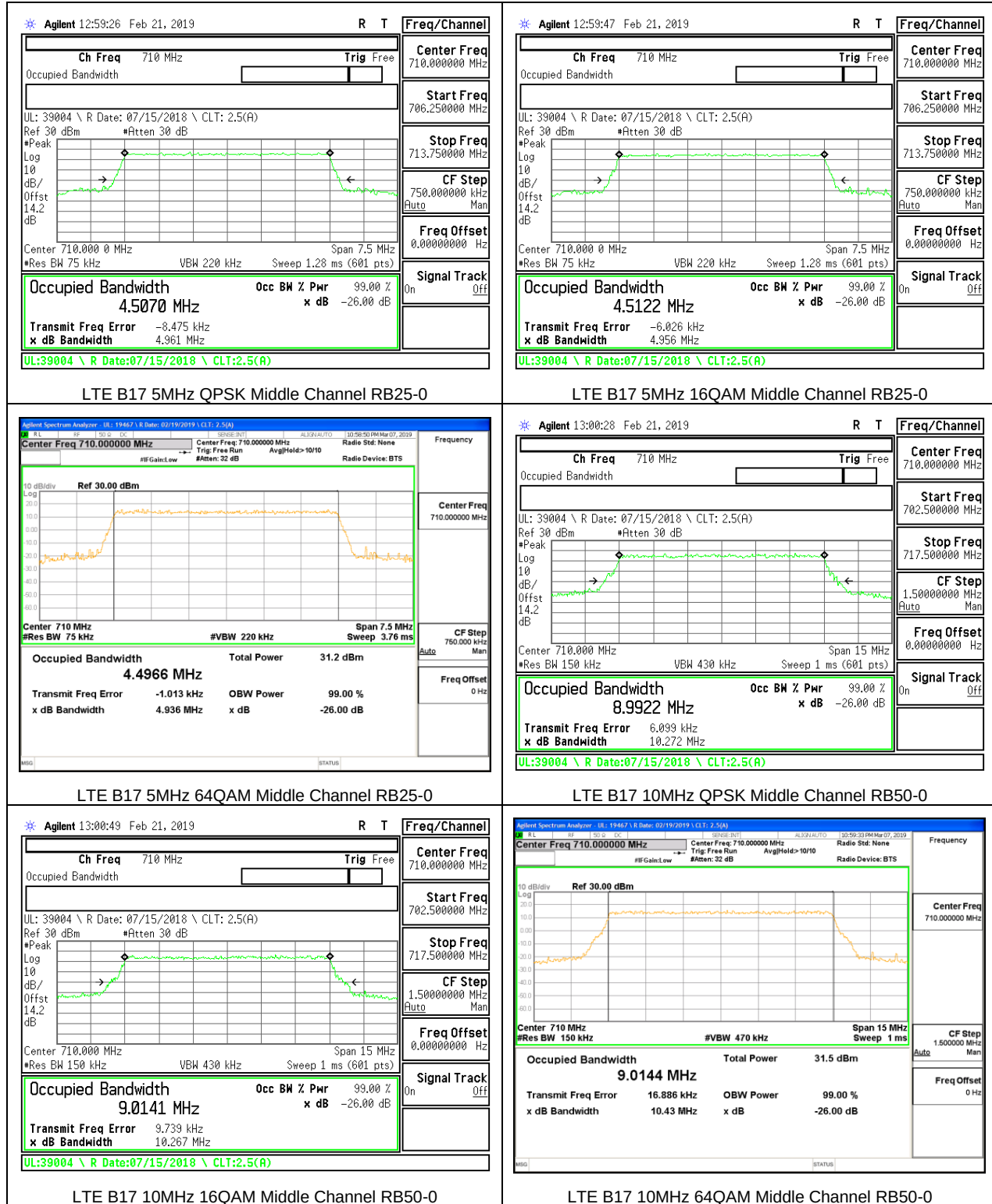


LTE B14 10MHz 16QAM Middle Channel RB50-0

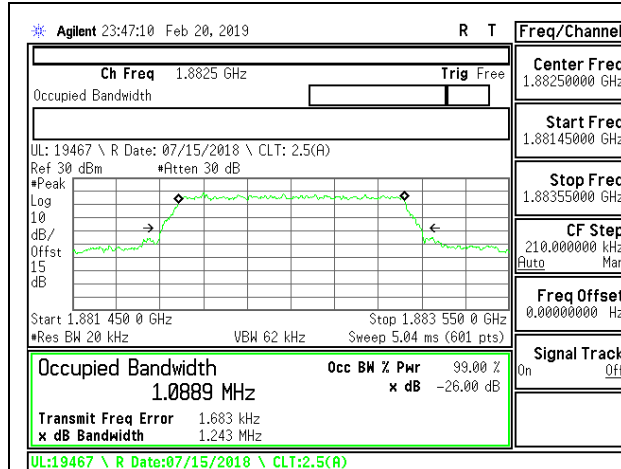


LTE B14 10MHz 64QAM Middle Channel RB50-0

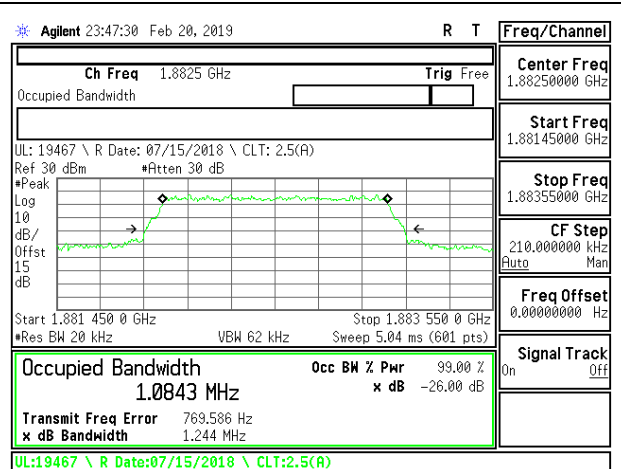
## 8.1.7. LTE BAND 17



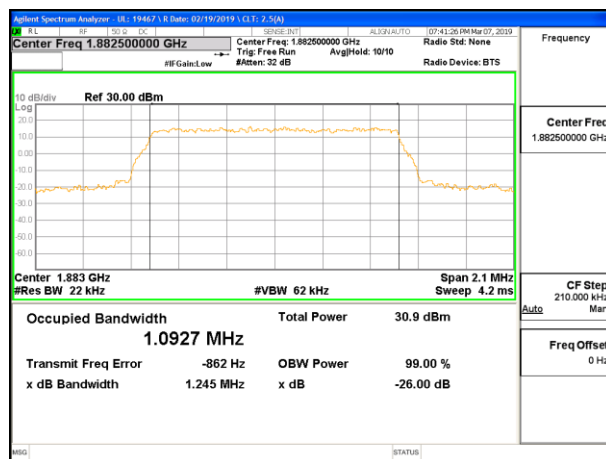
## 8.1.8. LTE BAND 25



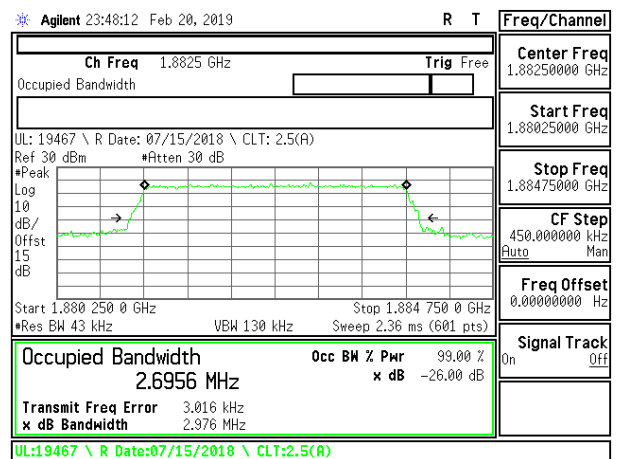
LTE B25 1.4MHz QPSK Middle Channel RB6-0



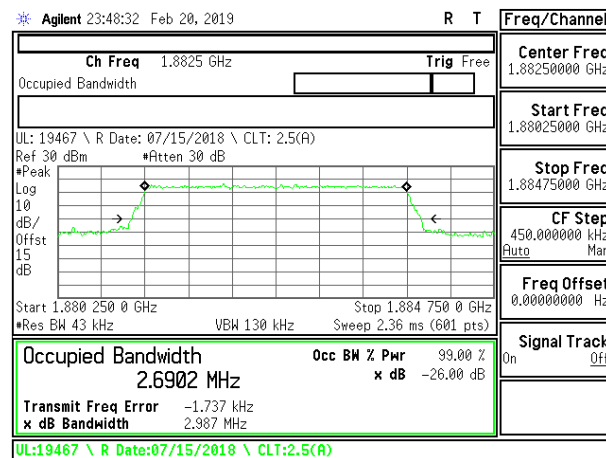
LTE B25 1.4MHz 16QAM Middle Channel RB6-0



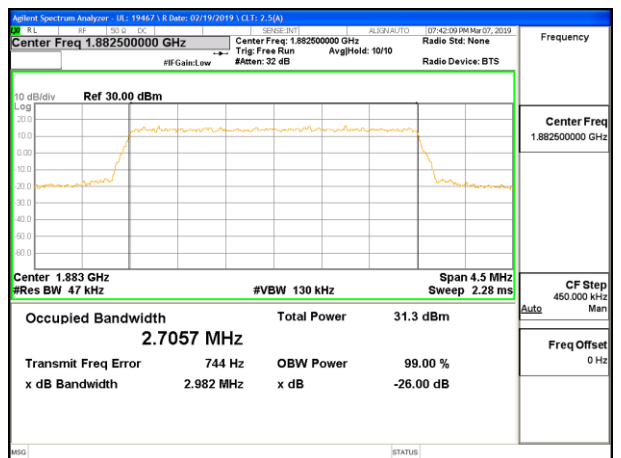
LTE B25 1.4MHz 64QAM Middle Channel RB6-0



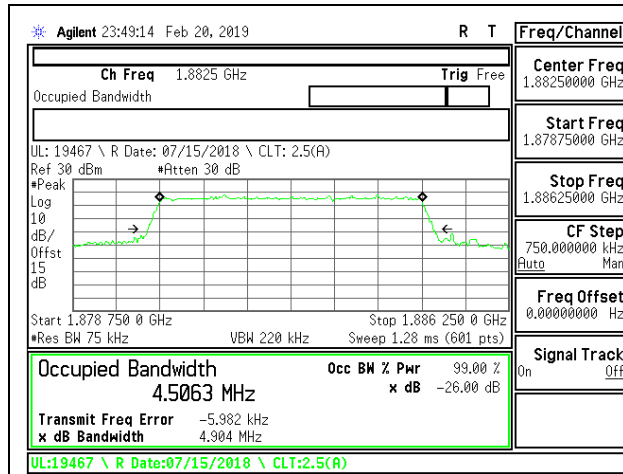
LTE B25 3MHz QPSK Middle Channel RB15-0



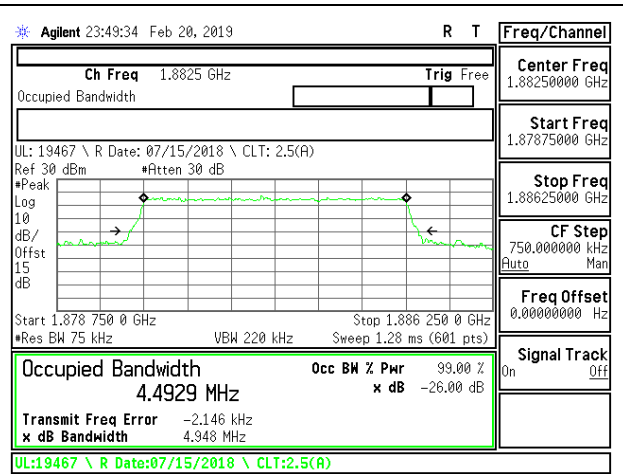
LTE B25 3MHz 16QAM Middle Channel RB15-0



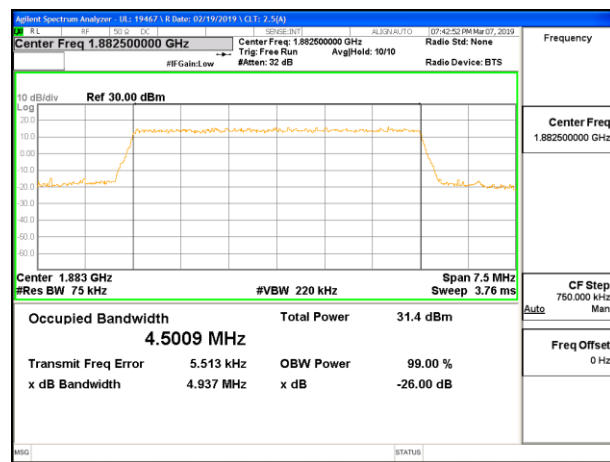
LTE B25 3MHz 64QAM Middle Channel RB15-0



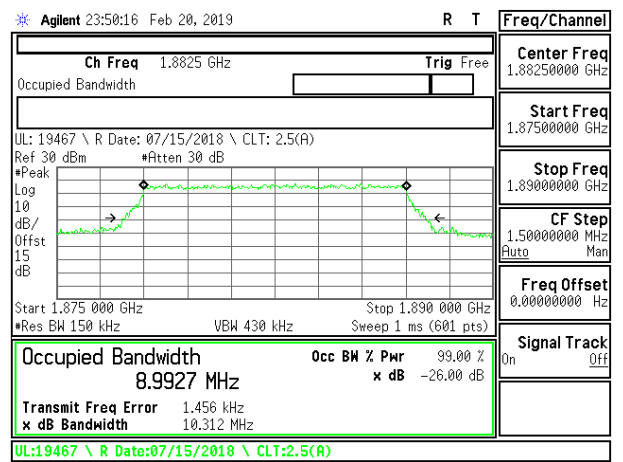
LTE B25 5MHz QPSK Middle Channel RB25-0



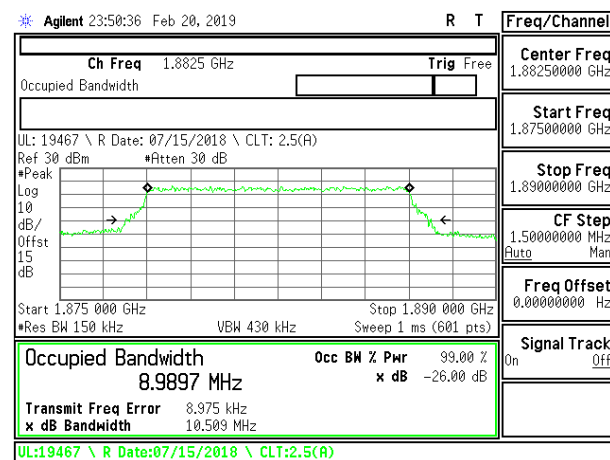
LTE B25 5MHz 16QAM Middle Channel RB25-0



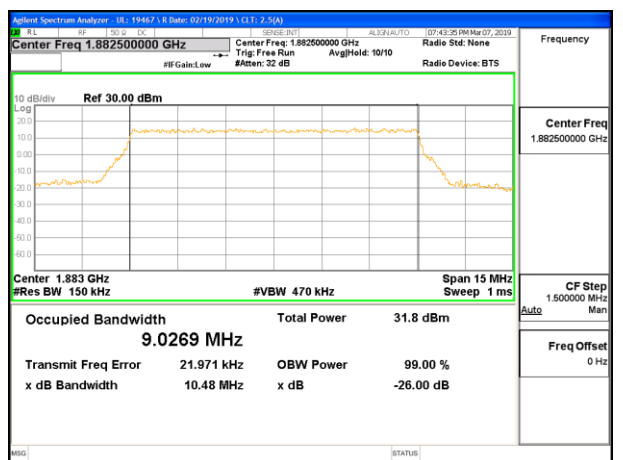
LTE B25 5MHz 64QAM Middle Channel RB25-0



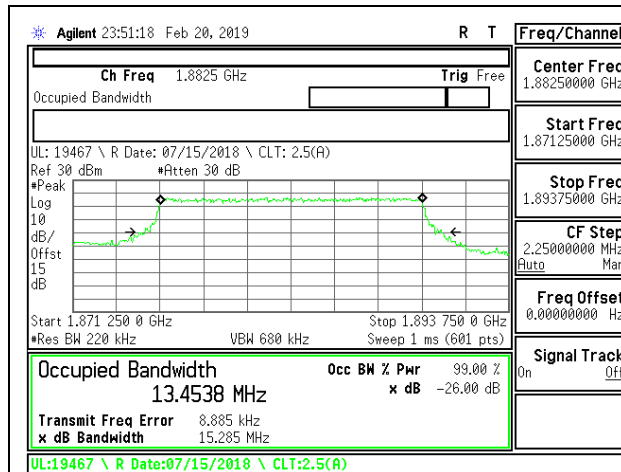
LTE B25 10MHz QPSK Middle Channel RB50-0



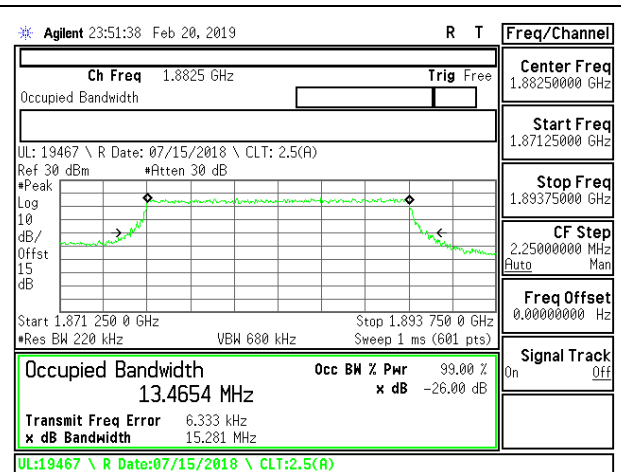
LTE B25 10MHz 16QAM Middle Channel RB50-0



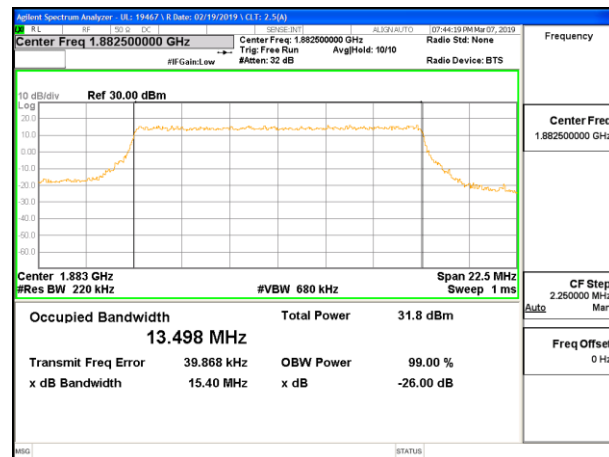
LTE B25 10MHz 64QAM Middle Channel RB50-0



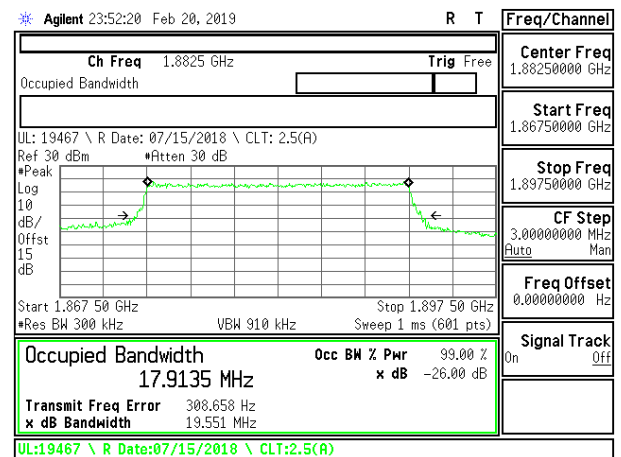
LTE B25 15MHz QPSK Middle Channel RB75-0



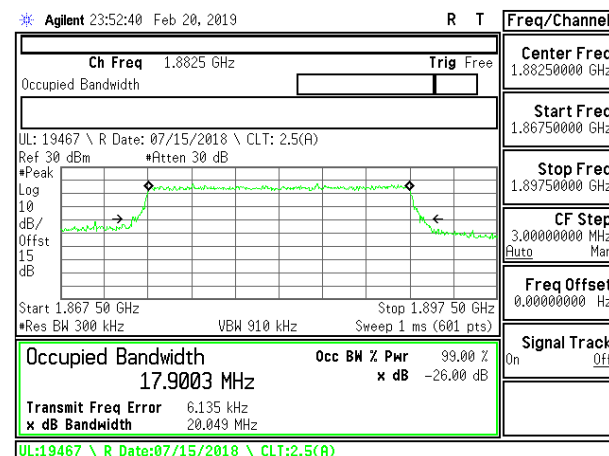
LTE B25 15MHz 16QAM Middle Channel RB75-0



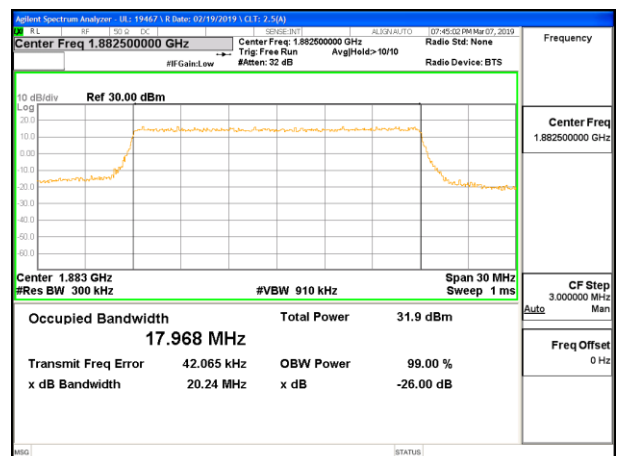
LTE B25 15MHz 64QAM Middle Channel RB75-0



LTE B25 20MHz QPSK Middle Channel RB100-0

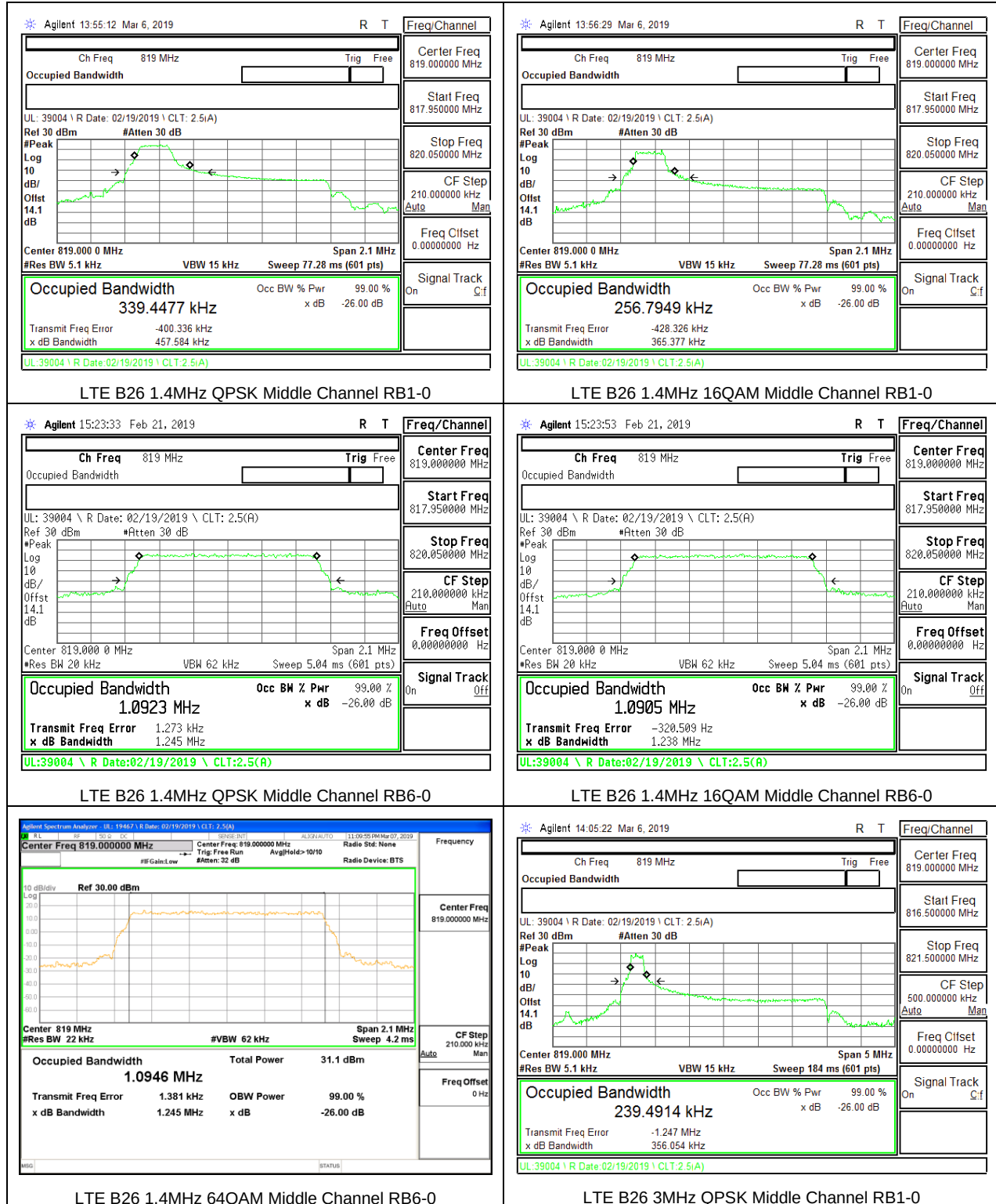


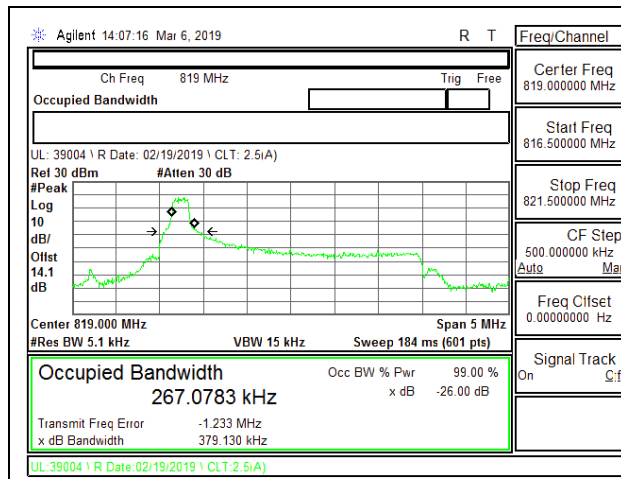
LTE B25 20MHz 16QAM Middle Channel RB100-0



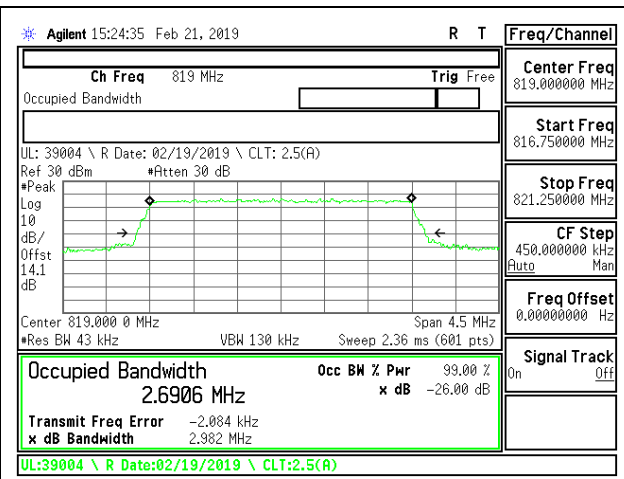
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## 8.1.9. LTE BAND 26

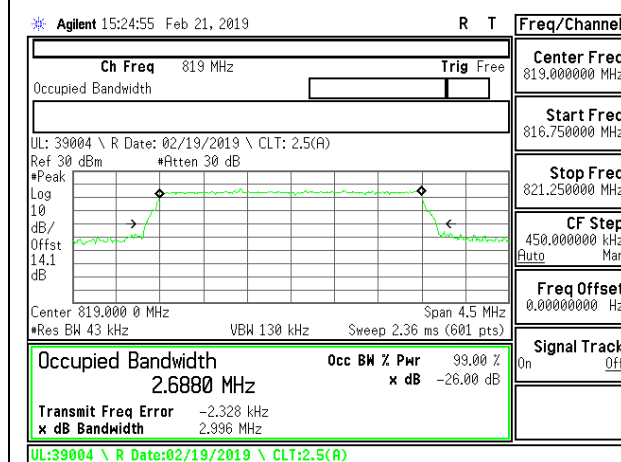




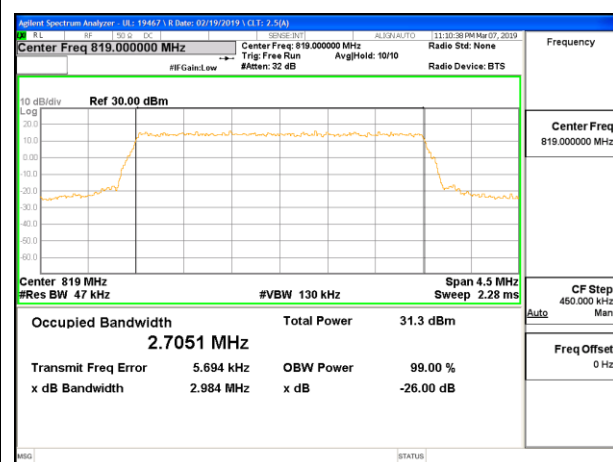
LTE B26 3MHz 16QAM Middle Channel RB1-0



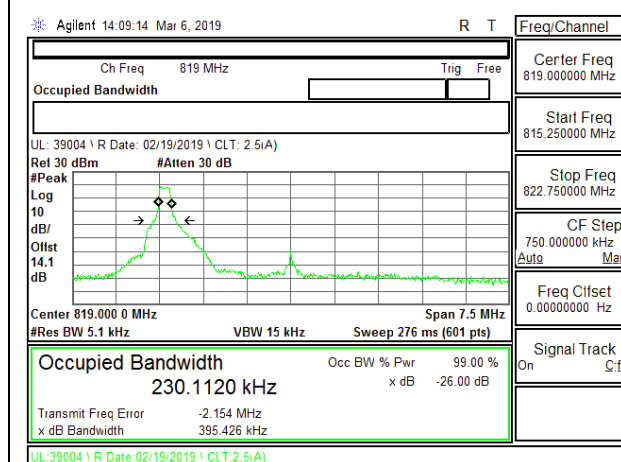
LTE B26 3MHz QPSK Middle Channel RB15-0



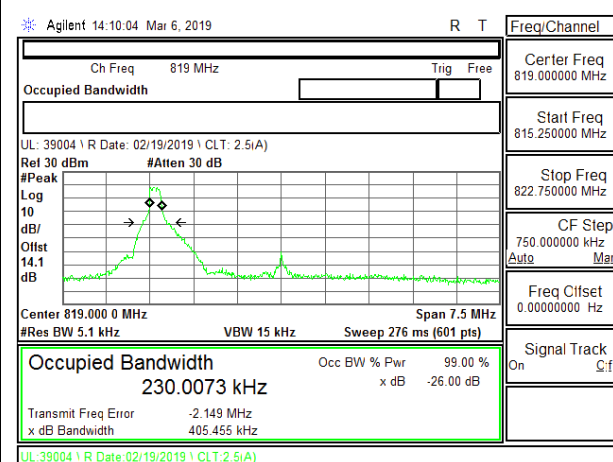
LTE B26 3MHz 16QAM Middle Channel RB15-0



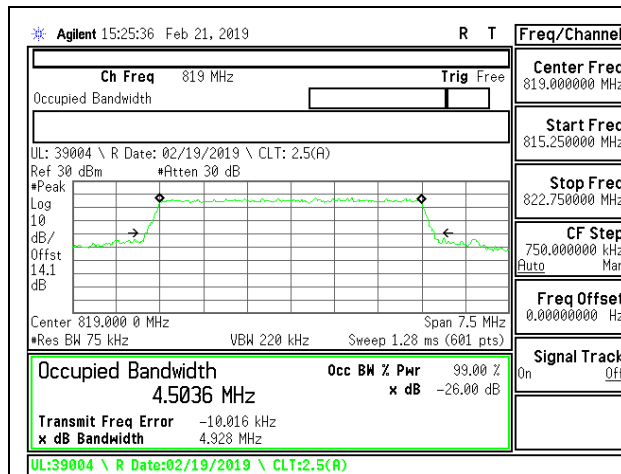
LTE B26 3MHz 64QAM Middle Channel RB15-0



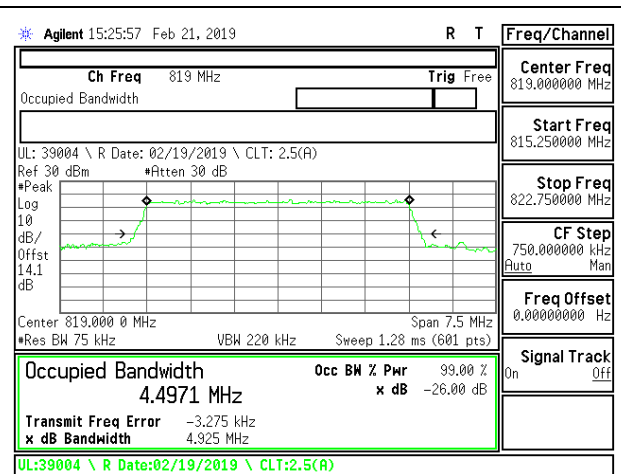
LTE B26 5MHz QPSK Middle Channel RB1-0



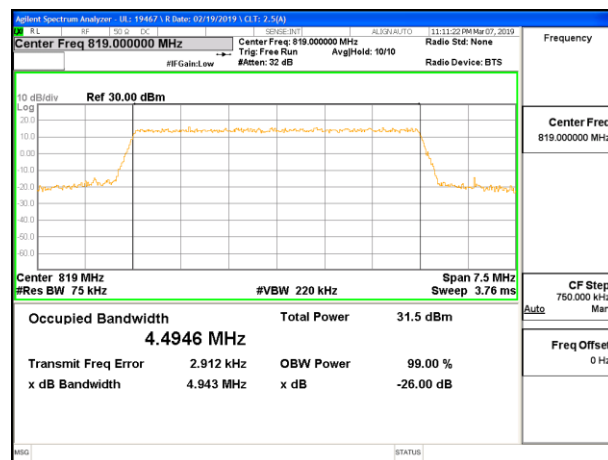
LTE B26 5MHz 16QAM Middle Channel RB1-0



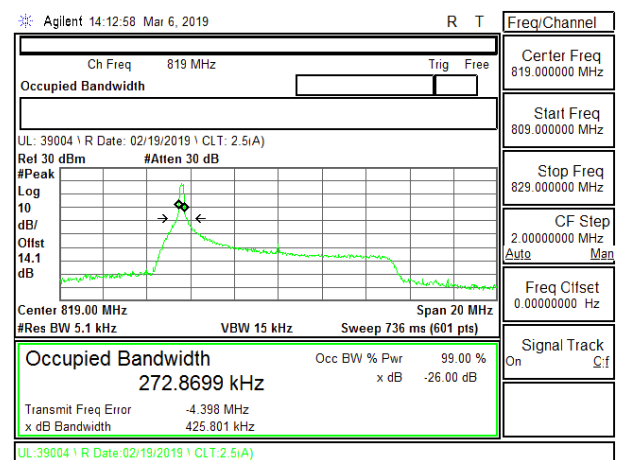
LTE B26 5MHz QPSK Middle Channel RB25-0



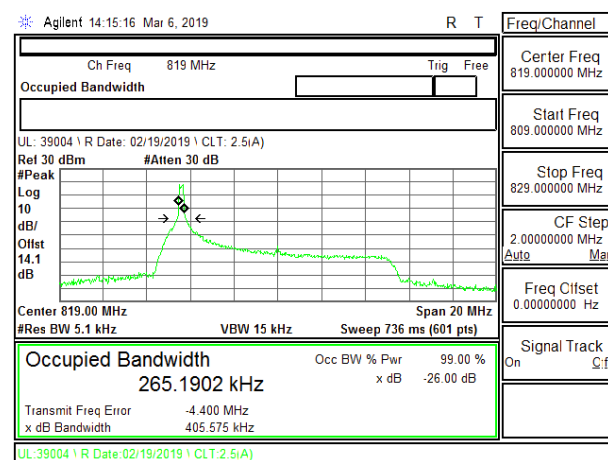
LTE B26 5MHz 16QAM Middle Channel RB25-0



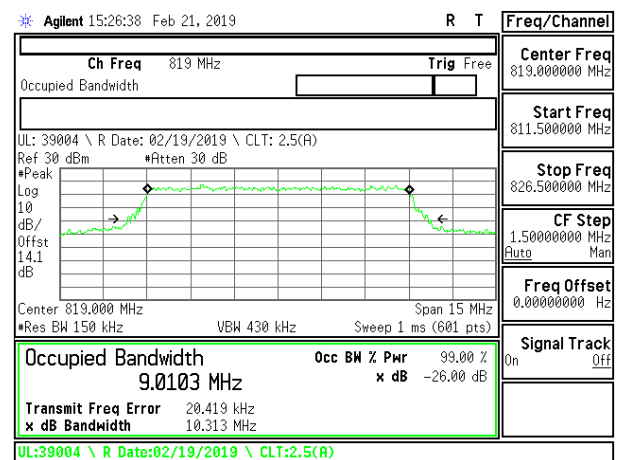
LTE B26 5MHz 64QAM Middle Channel RB25-0



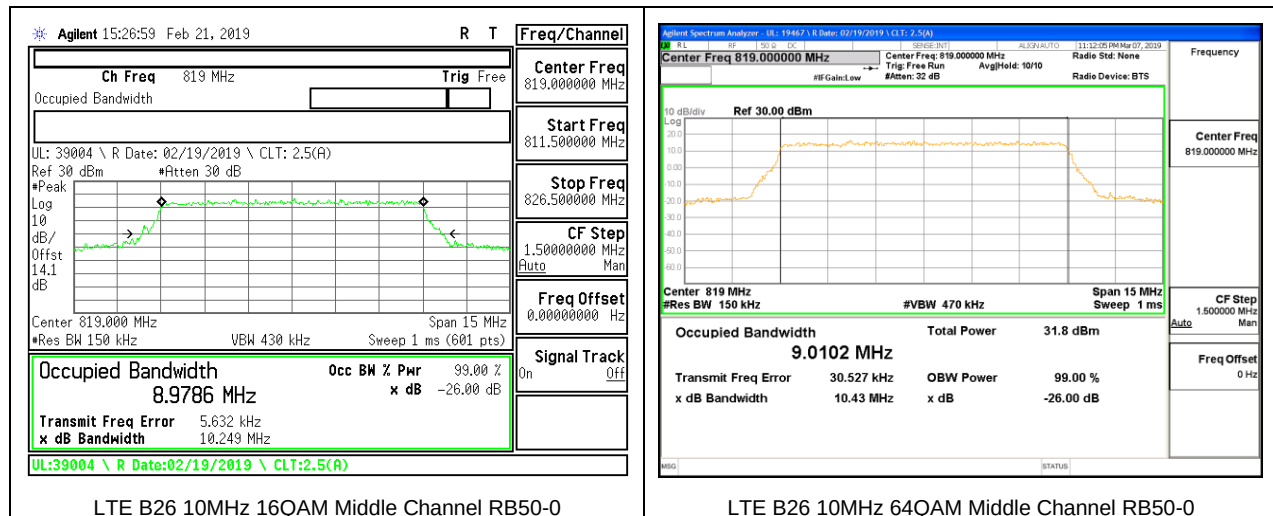
LTE B26 10MHz QPSK Middle Channel RB1-0



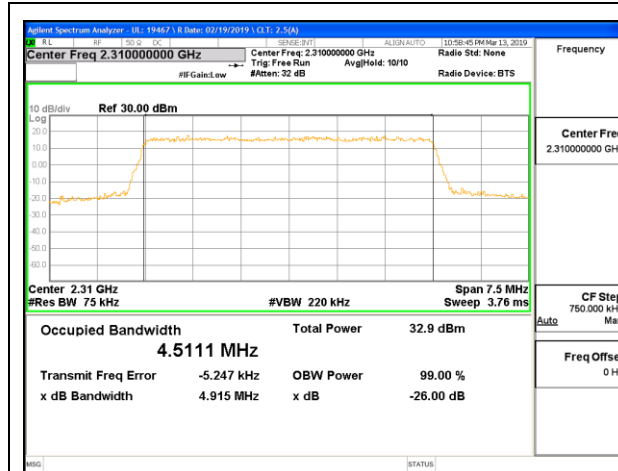
LTE B26 10MHz 16QAM Middle Channel RB1-0



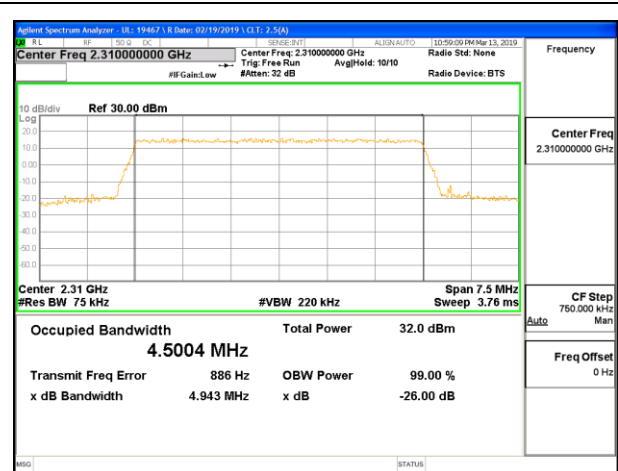
LTE B26 10MHz QPSK Middle Channel RB50-0



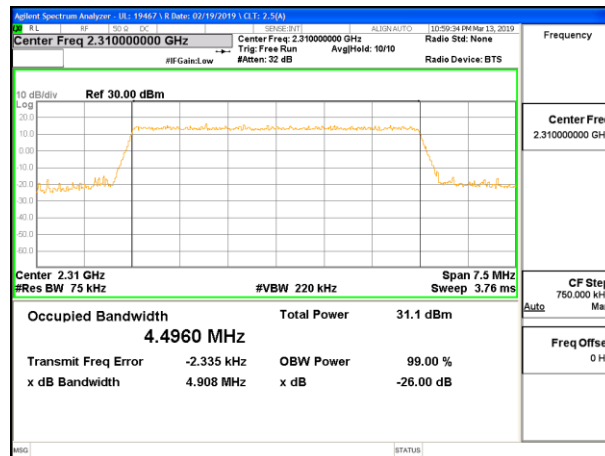
## 8.1.10. LTE BAND 30



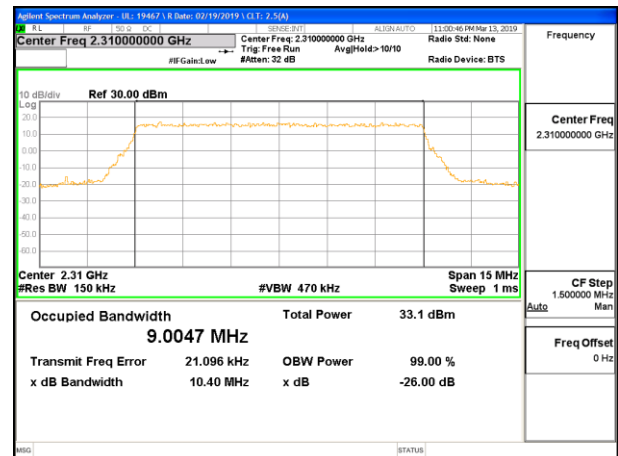
LTE B30 5MHz QPSK Middle Channel RB25-0



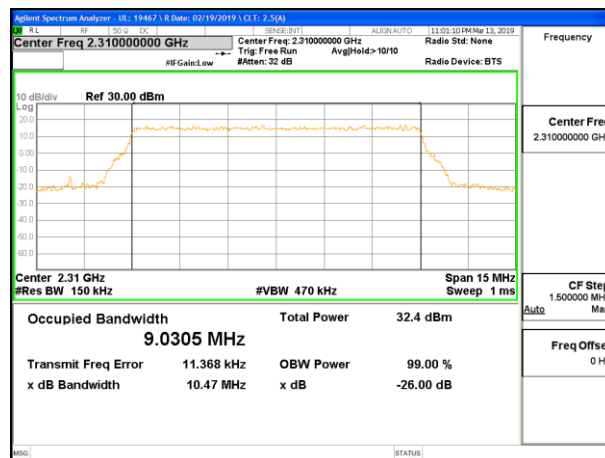
LTE B30 5MHz 16QAM Middle Channel RB25-0



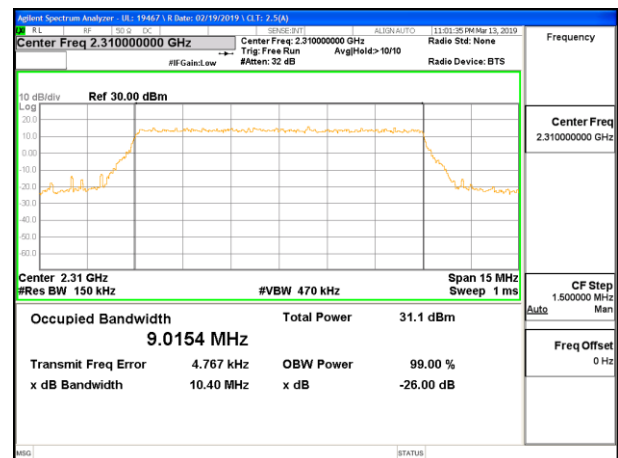
LTE B30 5MHz 64QAM Middle Channel RB25-0



LTE B30 10MHz QPSK Middle Channel RB50-0

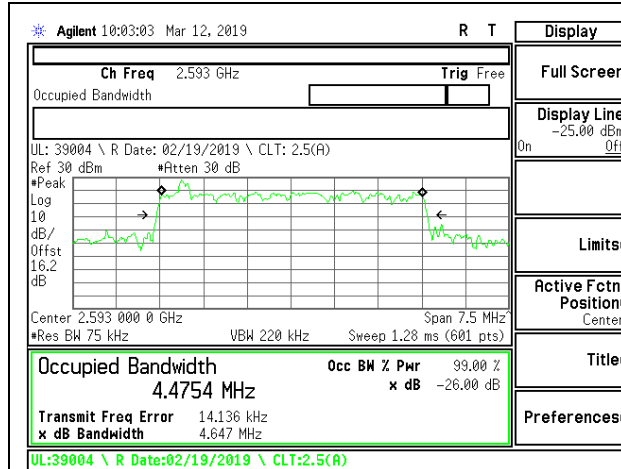


LTE B30 10MHz 16QAM Middle Channel RB50-0

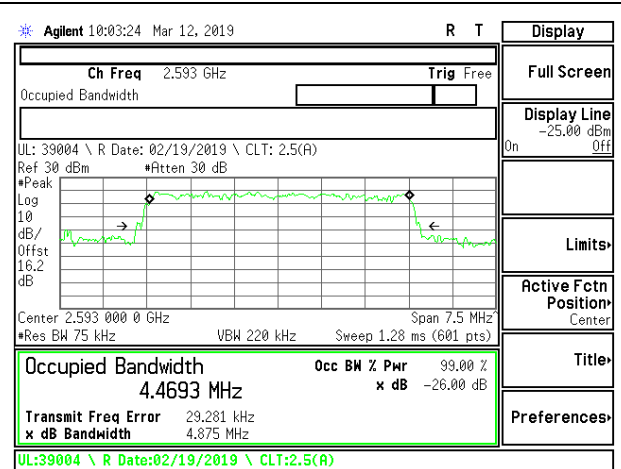


LTE B30 10MHz 64QAM Middle Channel RB50-0

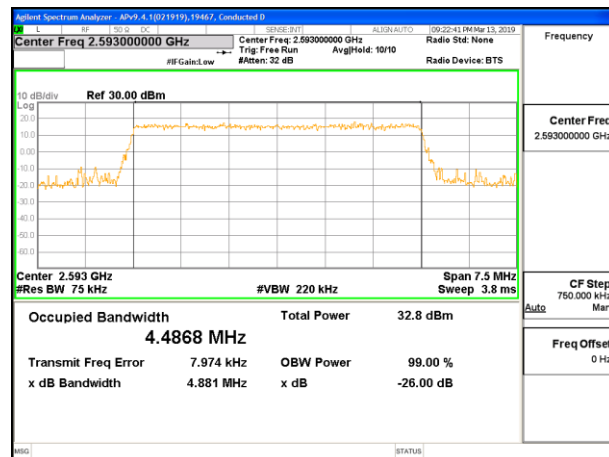
## 8.1.11. LTE BAND 41



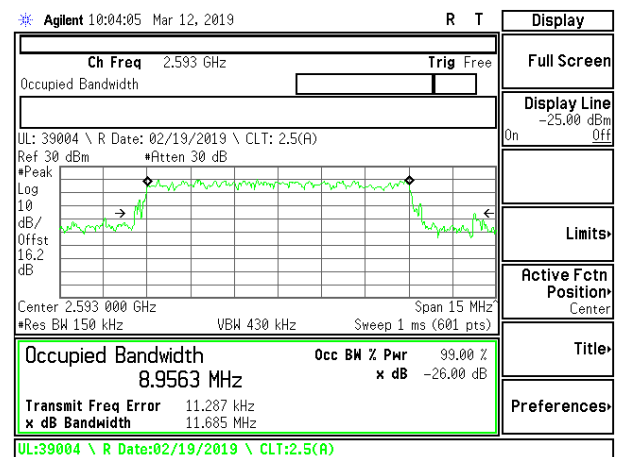
LTE B41 5MHz QPSK Middle Channel RB25-0



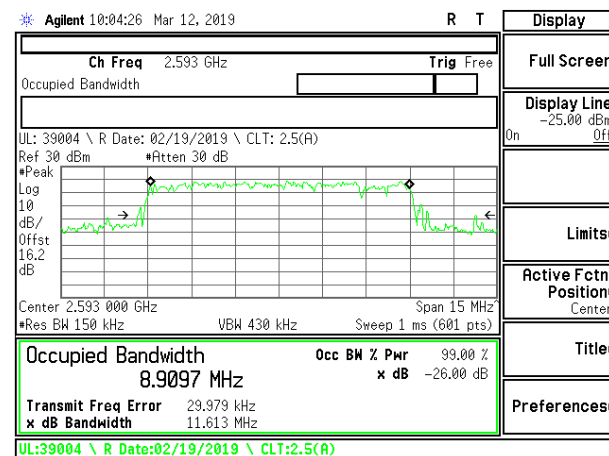
LTE B41 5MHz 16QAM Middle Channel RB25-0



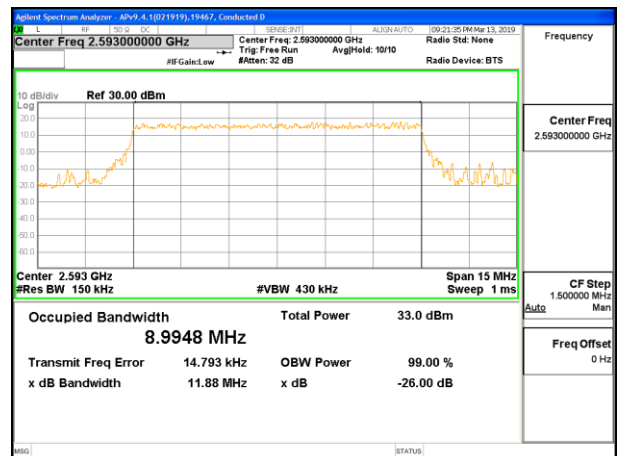
LTE B41 5MHz 64QAM Middle Channel RB25-0



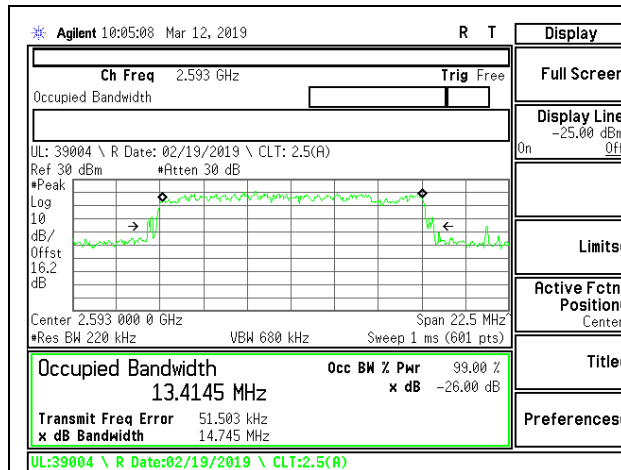
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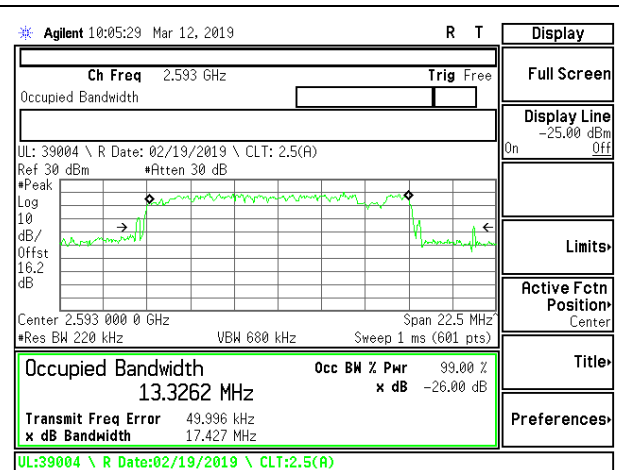
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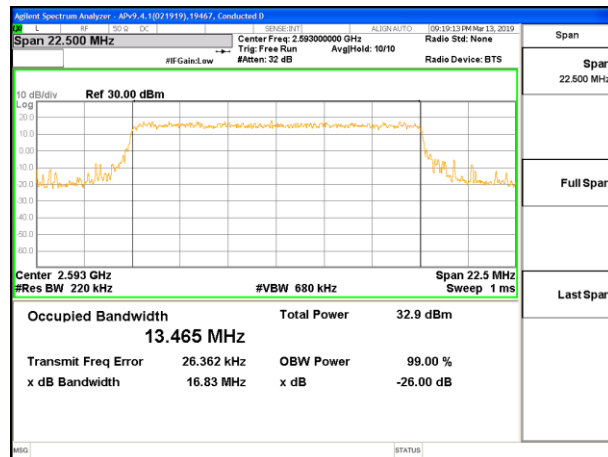
LTE B41 10MHz 64QAM Middle Channel RB50-0



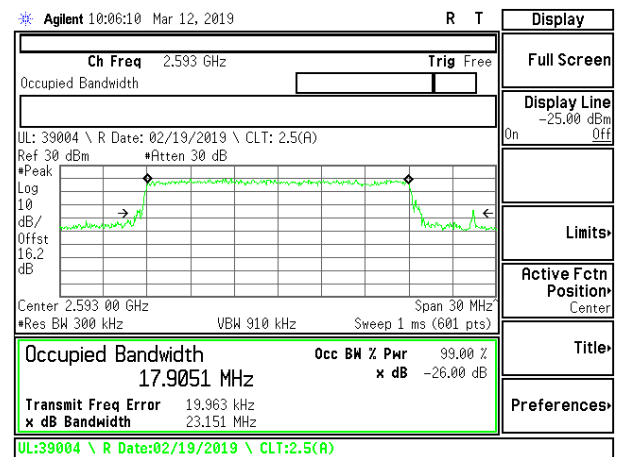
LTE B41 15MHz QPSK Middle Channel RB75-0



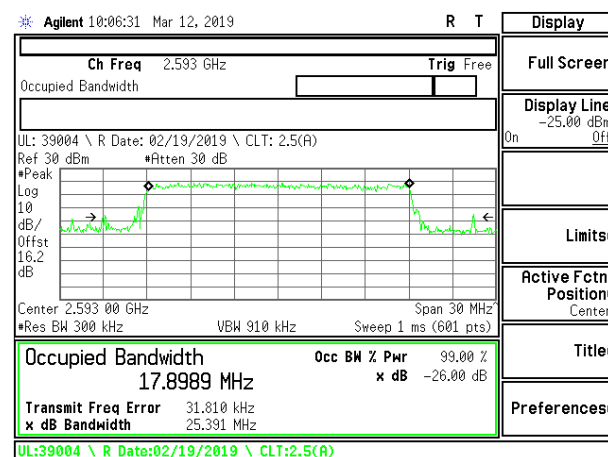
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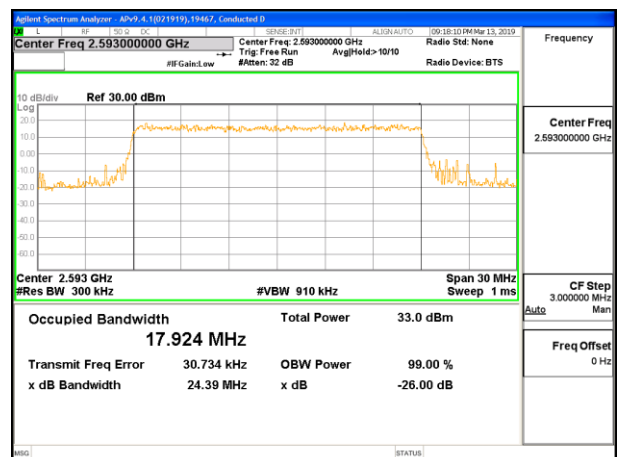
LTE B41 15MHz 64QAM Middle Channel RB75-0



LTE B41 20MHz QPSK Middle Channel RB100-0



LTE B41 20MHz 16QAM Middle Channel RB100-0



LTE B41 20MHz 64QAM Middle Channel RB100-0