# FCC CFR47 PART 22H, 24E, 27,90S CERTIFICATION TEST REPORT

# FCC ID: 2ANMU-RT3PLUS

| | |
|---|---|
| **Product:** | Rugged Smart Tablet |
| **Trade Mark:** | OUKITEL |
| **Model No.:** | RT3 Plus |
| **Family Model:** | RT3, RT3 GT, RT3 TITAN |
| **Report No.:** | S25040807006006 |
| **Issue Date:** | Jun. 09, 2025 |

## Prepared for

SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD

A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE, GUANLAN,LONGHUA SHENZHEN, 518XXX China

## Prepared by

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# TEST RESULT CERTIFICATION

| | |
|---|---|
| **Applicant's name** ..... : | SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD |
| Address..... : | A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE, GUANLAN,LONGHUA SHENZHEN, 518XXX China |
| **Manufacturer's Name**..... : | SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD |
| Address..... : | A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE, GUANLAN,LONGHUA SHENZHEN, 518XXX China |
| Product name..... : | Rugged Smart Tablet |
| Model and/or type reference .. : | RT3 Plus |
| Trade Mark..... : | OUKITEL |
| Family Model..... : | RT3, RT3 GT, RT3 TITAN |
| Test Sample Number..... | S250408070007 |
| **Standards**..... : | FCC CFR 47 Part 22H, Part 24E, Part 27, Part 90S |
| Test procedure ..... : | ANSI C63.26:2015<br>ANSI/TIA-603-E-2016 |

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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**Date of Test** .....

Date (s) of performance of tests..... Apr. 08, 2025 ~ Jun. 09, 2025

Date of Issue..... Jun. 09, 2025

Test Result..... **Pass**

| | | |
|---|---|---|
| Prepared By : | Reviewed By : | Approved By : |
| Allen Liu | Aaron Cheng | Alex Li |
| (Project Engineer) | (Supervisor) | (Manager) |

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# 1. GENERAL INFORMATION

## 1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

| | |
|---|---|
| Product Designation: | Rugged Smart Tablet |
| Trade Mark | OUKITEL |
| Model Name | RT3 Plus |
| Family Model | RT3, RT3 GT, RT3 TITAN |
| Model Difference | All models are the same circuit and RF module, except for the color. |
| FCC ID: | 2ANMU-RT3PLUS |
| Frequency Bands: | U.S. Bands:<br>☒LTE FDD Band 2, 4, 5, 7, 12, 17, 25, 26, 66<br>TDD Band 38, 41 |
| Frequency Range: | LTE FDD Band 2 Uplink: 1850MHz-1910MHz,<br>Downlink: 1930MHz-1990MHz;<br>LTE FDD Band 4 Uplink: 1710MHz-1755MHz,<br>Downlink: 2110MHz-2155MHz;<br>LTE FDD Band 5 Uplink: 824MHz-849MHz,<br>Downlink: 869MHz-894MHz;<br>LTE-FDD Band 7 Uplink: 2500MHz-2570MHz,<br>Downlink: 2620MHz-2690MHz;<br>LTE FDD Band 12 Uplink: 699MHz-716MHz,<br>Downlink: 729MHz-746MHz;<br>LTE FDD Band 17 Uplink: 704MHz-716MHz,<br>Downlink: 734MHz-746MHz;<br>LTE FDD Band 25 Uplink: 1850MHz-1915MHz,<br>Downlink: 1930MHz-1995MHz;<br>LTE FDD Band 26A Uplink: 814MHz-824MHz,<br>Downlink: 859MHz-869MHz;<br>LTE FDD Band 26B Uplink: 824MHz-849MHz,<br>Downlink: 869MHz-894MHz;<br>LTE TDD Band 38 Uplink& Downlink: 2570MHz-2620MHz<br>LTE TDD Band 41 Uplink & Downlink: 2535MHz-2655MHz,<br>LTE FDD Band 66 Uplink: 1710MHz-1780MHz,<br>Downlink: 2110MHz-2200MHz; |
| Type of Modulation: | QPSK/16QAM/64QAM(Only Downlink) |
| Power Class | Class 3 |
| SIM Card: | SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test. |
| Antenna: | PIFA Antenna |
| Antenna gain: | Band 2: -0.2 dBi, Band 4: 1.59 dBi, Band 5:0.42 dBi, Band 7: 1.35 dBi,<br>Band 12: -1.92 dBi, Band 17: -1.92 dBi, Band25:-0.2 dBi, Band 26:0.48 dBi,<br>Band 38: 1.29 dBi, Band 41: -1.11 dBi, Band66: 1.59 dBi; |
| Adapter | Model: HJ-PD18W-US<br>Input: 100-240V~50/60Hz 0.6A<br>Output: 5.0V⎓3.0A 15.0W OR 9.0V⎓2.0A 18.0W<br>OR 12.0V⎓1.5A 18.0W Max |
| Battery | DC 3.85V, 11000mAh, 42.35Wh |
| Power supply | DC 3.85V from battery or DC 5V/9V/12V from adapter |
| Extreme Vol. Limits: | DC 3.27V to DC 4.43V (Nominal DC 3.85V)（Note 1） |

| | |
|---|---|
| HW Version | P593_MAIN_PCB |
| FW Version | N/A |
| SW Version | V04 |
| ** Note1: The High Voltage DC 4.43V and Low Voltage 3.27V was declared by manufacturer, The EUT couldn’t be operate normally with higher or lower voltage. | |

### 1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2ANMU-RT3PLUS** filing to comply with the FCC Part 22H&24E&27&90S

### 1.3 TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI/TIA-603-E-2016, FCC CFR 47 Part 2, Part 22, Part 24, Part 27, Part 90S,ANSI C63.26:2015.

### 1.4 TEST FACILITY

The test site used to collect the radiated data is located at:

ShenZhen NTEK Testing Technology Co., Ltd.

No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of China.

The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.26:2015& ANSI C63.4: 2014.

FCC Registration No.:463705

IC Registration No.:9270A,

CNAS Registration No.:L5516

## MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

| No. | Item | Uncertainty |
|---|---|---|
| 1 | Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 2.5dB |
| | | |

### 1.5 SPECIAL ACCESSORIES

The battery and the charger, earphone supplied by the applicant were used as accessories and being tested with EUT intended for FCC grant together.

### 1.6 WORST-CASE CONFIGURATION AND MODE

The worst-case scenario for all measurements is based on the investigation results.

The device has LTE Bands of: Band 2/4/5/7/12/17/25/26/38/41/66

The RB Size was selected to measure for peak or average ERP and EIRP, which was based on the conducted power verification baseline data.

For the fundamental investigation of radiated emissions, the EUT is investigated for vertical and horizontal antenna orientations and X Y and Z orientations of the EUT alone. After the investigations the worst case was determined to be at X orientation for all LTE bands.

# 2. SYSTEM TEST CONFIGURATION

## 2.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

## 2.2 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

## 2.3 CONFIGURATION OF EUT SYSTEM

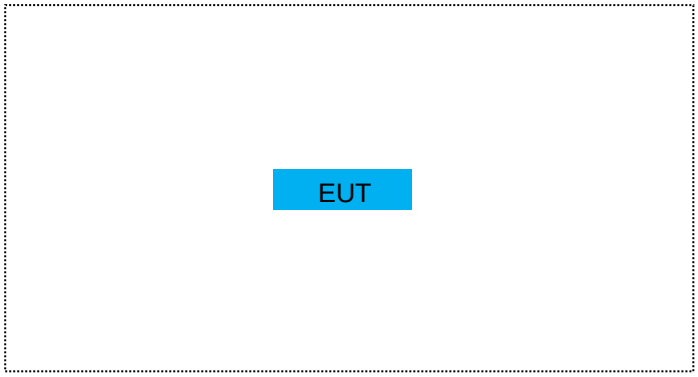
Table 2-1 Equipment Used in EUT System

| Item | Equipment | Model No. | ID or Specification | Note |
|---|---|---|---|---|
| 1 | Rugged Smart Tablet | RT3 Plus | FCC ID: 2ANMU-RT3PLUS | EUT |
| | | | | |
| | | | | |

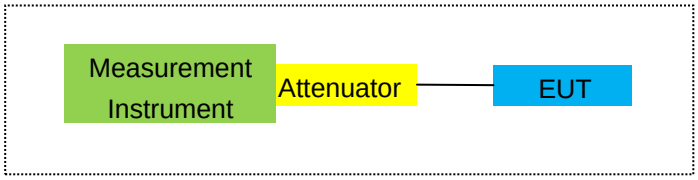
*Note: All the accessories have been used during the test.*
*the following "EUT" in setup diagram means EUT system.*

## 2.4 TEST SETUP

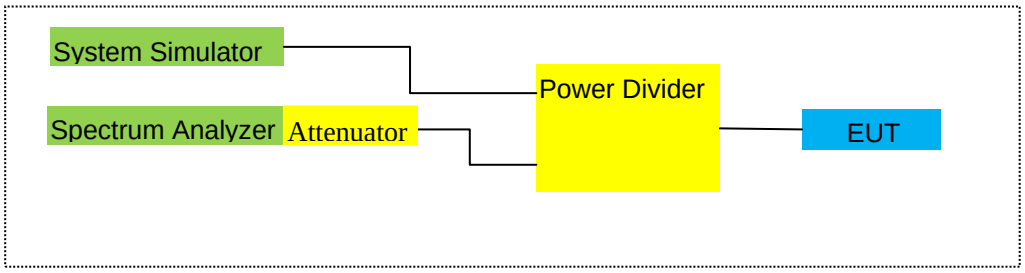
For Radiated Test Cases



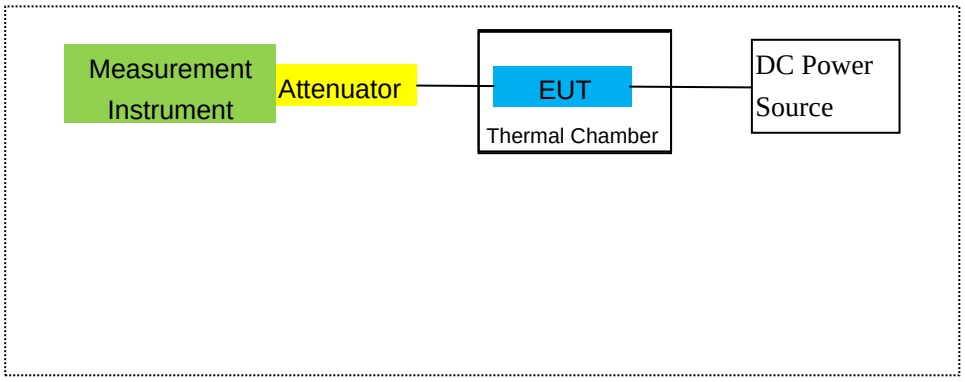

For Conducted Output Power




For Peak-to Average Ratio, Occupied Bandwidth, Conducted Band edge and Conducted Spurious Emission




For Frequency Stability




Note: EUT built-in battery-powered, the battery is fully-charged.

# 3.TEST AND MEASUREMENT EQUIPMENT

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

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Last calibration | Calibrated until | Calibration period |
|---|---|---|---|---|---|---|---|
| 1 | MXA Signal Analyzer | Agilent | N9020A | MY49100060 | 2024.04.25<br>2025.04.17 | 2025.04.24<br>2026.04.16 | 1 year |
| 2 | Test Receiver | R&S | ESPI | 101318 | 2024.04.26<br>2025.04.17 | 2025.04.25<br>2026.04.16 | 1 year |
| 3 | Bilog Antenna | TESEQ | CBL6111D | 31216 | 2024.05.12<br>2025.05.11 | 2025.05.11<br>2026.05.10 | 1 year |
| 4 | 50Ω Coaxial Switch | Anritsu | MP59B | 6200983705 | 2024.04.26 | 2027.04.25 | 3 year |
| 5 | Broadband Horn Antenna | SCHWARZBECK | BBHA 9120 D | 2816 | 2024.5.18 | 2027.5.17 | 3 year |
| 6 | Broadband Horn Antenna | SCHWARZBECK | BBHA 9120 D | 2817 | 2024.5.18 | 2027.5.17 | 3 year |
| 7 | Amplifier | EM | EM-30180 | 060538 | 2024.04.26<br>2025.04.17 | 2025.04.25<br>2026.04.16 | 1 year |
| 8 | Active Loop Antenna | SCHWARZBECK | FMZB 1519 B | 055 | 2024.05.17 | 2027.05.16 | 3 year |
| 9 | Power Meter | R&S | NRVS | 100696 | 2024.04.26<br>2025.04.17 | 2025.04.25<br>2026.04.16 | 1 year |
| 10 | Power Sensor | R&S | URV5-Z4 | 0395.1619.05 | 2024.04.26<br>2025.04.17 | 2025.04.25<br>2026.04.16 | 1 year |
| 11 | Test Cable | N/A | R-01 | N/A | 2022.06.17 | 2025.06.16 | 3 year |
| 12 | Test Cable | N/A | R-02 | N/A | 2022.06.17 | 2025.06.16 | 3 year |
| 13 | Test Cable | N/A | R-03 | N/A | 2022.06.17 | 2025.06.16 | 3 year |
| 14 | Test Receiver | R&S | ESCI | 101160 | 2024.04.26<br>2025.04.17 | 2025.04.25<br>2026.04.16 | 1 year |
| 15 | LISN | R&S | ENV216 | 101313 | 2024.04.25<br>2025.04.17 | 2025.04.24<br>2026.04.16 | 1 year |
| 16 | LISN | EMCO | 3816/2 | 00042990 | 2024.04.25<br>2025.04.17 | 2025.04.24<br>2026.04.16 | 1 year |
| 17 | 50Ω Coaxial Switch | Anritsu | MP59B | 6200983705 | 2024.04.26 | 2027.04.25 | 3 year |
| 18 | Field strength probe | narda | EP601 | 711WX81278 | 2024.04.25<br>2025.04.17 | 2025.04.24<br>2026.04.16 | 1 year |
| 19 | Test Cable | N/A | C01 | N/A | 2023.05.06 | 2026.05.05 | 3 year |
| 20 | Test Cable | N/A | C02 | N/A | 2023.05.06 | 2026.05.05 | 3 year |
| 21 | Test Cable | N/A | C03 | N/A | 2023.05.06 | 2026.05.05 | 3 year |
| 22 | Spectrum Analyzer | Agilent | E4440A | MY41000130 | 2024.04.26<br>2025.04.17 | 2025.04.25<br>2026.04.16 | 1 year |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23 | EMI Test Receiver | R&S | ESCI | 101160 | 2024.04.26<br>2025.04.17 | 2025.04.25<br>2026.04.16 | 1 year |
| 24 | Universal Radio Communication Tester | R&S | CMU200 | 105747 | 2024.04.26<br>2025.04.17 | 2025.04.25<br>2026.04.16 | 1 year |
| 25 | High and Low Temperature Box | WEISS | WT 20/40 EMC Simpac | 5822611946 0030 | 2024.05.30 | 2027.05.29 | 3 year |
| 26 | DC Power Source | N/A | PS-6005D | 2017040292 3 | 2024.04.25 | 2027.04.24 | 3 year |
| 27 | MXG Vector Signal Generator | Agilent | N5183B | MY57280984 | 2024.05.30<br>2025.04.17 | 2025.05.29<br>2026.04.16 | 1 year |
| 28 | Log-Periodic Antenna | SCHWARZBECK | VULB 9162 | 584 | 2024.05.25<br>2025.04.17 | 2025.05.24<br>2026.04.16 | 1 year |
| 29 | Log-Periodic Antenna | SCHWARZBECK | VULB 9162 | 586 | 2024.05.25<br>2025.04.17 | 2025.05.24<br>2026.04.16 | 1 year |
| 30 | Communication Tester | R&S | CMW500 | 148500 | 2024.05.30<br>2025.05.06 | 2025.05.29<br>2026.05.05 | 1 year |

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable& DC Power Source which is scheduled for calibration every 3 years

Measurement Software

| Item | Manufacturer | Software Name | Software Version | Description |
|---|---|---|---|---|
| 1 | MWRFtest | MTS 8200 | 2.0 | RF Conducted Test |
| 2 | Farad | EZ-EMC_RE | AIT-03A | RadiatedTest |
| 3 | raditeq | RadiMation | 2023.1.3 | RadiatedTest |

# 4. OUTPUT POWER

## 4.1 OUTPUT POWER MEASUREMENT

**LTE Measurement Procedure:**

All LTE bands conducted power peak and average are 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 3**

| Modulation | Channel bandwidth / Transmission bandwidth (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 |

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[1] | 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.

Test data reference attachment.

# 5. 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 low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

**MODES TESTED**

Band 2/4/5/7/12/17/25/26/38/41/66

**RESULTS**

**PASS**

Test data reference attachment.

# 6. BANDEDGE AND EMISSION MASK

**RULE PART(S)**

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53, and §90.691
FCC: §22.359

**LIMITS**

FCC: §22.917, §24.238, §27.53
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

(m)(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.Show citation box.
(c)(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

FCC: §90.691 Emission mask requirements for EA-based systems.
(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

**TEST PROCEDURE**

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

Set a marker to point the corresponding band edge frequency in each test case.

Set resolution bandwidth to at least 1% of emission bandwidth.

**MODES TESTED**

Band 2/4/5/7/12/17/25/26/38/41/66

**RESULTS**

Test data reference attachment.

# 7. OUT OF BAND EMISSIONS

**RULE PART(S)**

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53 and §90.691

**LIMITS**

1. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.
2. The Band 7/41 emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log (P) dB.

**TEST PROCEDURE**

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

□

□ Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

**MODES TESTED**

□ Band 2/4/5/7/12/17/25/26/38/41/66

□

## 7.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

Test data reference attachment.

# 8. RADIATED MEASUREMENT

## 8.1. RADIATED POWER (ERP & EIRP)

**RULE PART(S)**

FCC: §2.1046, §22.913, §24.232, §27.50 and §90.635

**LIMITS:**

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
24.232 (c) Mobile and portable stations are limited to 2 watts EIRP.
27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.
27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.
27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.
27.50 (h)(2) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.
90.635(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

**TEST PROCEDURE**

ANSI/TIA-603-E Clause 2.2.17
KDB 971168 v02r01 RF power output using broadband peak and average power meter method.
KDB 971168 D01 Power Meas License Digital Systems v02r01, “Measurement Guidance for Certification of Licensed Digital Transmitters”

**MODES TESTED**

- Band 2/4/5/7/12/17/25/26/38/41/66

**RESULTS**

Pass

## 8.2 LTE BAND 2

| | Radiated Power (EIRP) for Band 2 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 1.4MHz Band QPSK | 1/#Mid | 1850.7 | -4.33 | 3.76 | 28.24 | 20.15 | 103.514 | Horizontal | 2 | Pass |
| | | 1880 | -4.14 | 3.91 | 28.22 | 20.17 | 103.992 | Horizontal | 2 | Pass |
| | | 1909.3 | -4.05 | 3.93 | 28.20 | 20.22 | 105.196 | Horizontal | 2 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 1851.5 | -4.39 | 3.77 | 28.23 | 20.07 | 101.625 | Horizontal | 2 | Pass |
| | | 1880 | -4.24 | 3.91 | 28.24 | 20.09 | 102.094 | Horizontal | 2 | Pass |
| | | 1908.5 | -4.11 | 3.94 | 28.25 | 20.20 | 104.713 | Horizontal | 2 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 1852.5 | -4.28 | 3.77 | 28.31 | 20.26 | 106.170 | Horizontal | 2 | Pass |
| | | 1880 | -3.90 | 3.91 | 28.22 | 20.41 | 109.901 | Horizontal | 2 | Pass |
| | | 1907.5 | -3.83 | 3.94 | 28.20 | 20.43 | 110.408 | Horizontal | 2 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 1855 | -4.14 | 3.79 | 28.33 | 20.40 | 109.648 | Horizontal | 2 | Pass |
| | | 1880 | -3.84 | 3.95 | 28.22 | 20.43 | 110.408 | Horizontal | 2 | Pass |
| | | 1905 | -3.73 | 3.97 | 28.19 | 20.49 | 111.944 | Horizontal | 2 | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 1857.5 | -4.10 | 3.79 | 28.34 | 20.45 | 110.917 | Horizontal | 2 | Pass |
| | | 1880 | -3.89 | 3.95 | 28.22 | 20.38 | 109.144 | Horizontal | 2 | Pass |
| | | 1902.5 | -3.75 | 3.97 | 28.18 | 20.46 | 111.173 | Horizontal | 2 | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 1860 | -4.09 | 3.81 | 28.35 | 20.45 | 110.917 | Horizontal | 2 | Pass |
| | | 1880 | -3.76 | 3.96 | 28.22 | **20.50** | 112.202 | Horizontal | 2 | Pass |
| | | 1900 | -3.70 | 4.00 | 28.16 | 20.46 | 111.173 | Horizontal | 2 | Pass |
| 1.4MHz Band QPSK | 1/#Mid | 1850.7 | -5.50 | 3.76 | 28.24 | 18.98 | 79.068 | Vertical | 2 | Pass |
| | | 1880 | -4.96 | 3.91 | 28.22 | 19.35 | 86.099 | Vertical | 2 | Pass |
| | | 1909.3 | -5.16 | 3.93 | 28.20 | 19.11 | 81.470 | Vertical | 2 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 1851.5 | -4.68 | 3.77 | 28.23 | 19.78 | 95.060 | Vertical | 2 | Pass |
| | | 1880 | -4.74 | 3.91 | 28.24 | 19.59 | 90.991 | Vertical | 2 | Pass |
| | | 1908.5 | -5.22 | 3.94 | 28.25 | 19.09 | 81.096 | Vertical | 2 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 1852.5 | -5.46 | 3.77 | 28.31 | 19.08 | 80.910 | Vertical | 2 | Pass |
| | | 1880 | -4.92 | 3.91 | 28.22 | 19.39 | 86.896 | Vertical | 2 | Pass |
| | | 1907.5 | -4.87 | 3.94 | 28.20 | 19.39 | 86.896 | Vertical | 2 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 1855 | -5.62 | 3.79 | 28.33 | 18.92 | 77.983 | Vertical | 2 | Pass |
| | | 1880 | -4.66 | 3.95 | 28.22 | 19.61 | 91.411 | Vertical | 2 | Pass |
| | | 1905 | -4.50 | 3.97 | 28.19 | 19.72 | 93.756 | Vertical | 2 | Pass |
| 15.0MHz | 1/#Mid | 1857.5 | -5.36 | 3.79 | 28.34 | 19.19 | 82.985 | Vertical | 2 | Pass |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Band | | 1880 | -5.30 | 3.95 | 28.22 | 18.97 | 78.886 | Vertical | 2 | Pass |
| QPSK | | 1902.5 | -5.26 | 3.97 | 28.18 | 18.95 | 78.524 | Vertical | 2 | Pass |
| 20.0MHz | | 1860 | -4.70 | 3.81 | 28.35 | 19.84 | 96.383 | Vertical | 2 | Pass |
| Band | 1/#Mid | 1880 | -5.22 | 3.96 | 28.22 | 19.04 | 80.168 | Vertical | 2 | Pass |
| QPSK | | 1900 | -5.11 | 4.00 | 28.16 | 19.05 | 80.353 | Vertical | 2 | Pass |

| | Radiated Power (EIRP) for Band 2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 1.4MHz Band 16 QAM | 1/#Mid | 1850.7 | -5.45 | 3.76 | 28.24 | 19.03 | 79.983 | Horizontal | 2 | Pass |
| | | 1880 | -4.92 | 3.91 | 28.22 | 19.39 | 86.896 | Horizontal | 2 | Pass |
| | | 1909.3 | -4.85 | 3.93 | 28.20 | 19.42 | 87.498 | Horizontal | 2 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 1851.5 | -4.95 | 3.77 | 28.23 | 19.51 | 89.331 | Horizontal | 2 | Pass |
| | | 1880 | -5.03 | 3.91 | 28.24 | 19.30 | 85.114 | Horizontal | 2 | Pass |
| | | 1908.5 | -5.24 | 3.94 | 28.25 | 19.07 | 80.724 | Horizontal | 2 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 1852.5 | -4.89 | 3.77 | 28.31 | 19.65 | 92.257 | Horizontal | 2 | Pass |
| | | 1880 | -4.80 | 3.91 | 28.22 | 19.51 | 89.331 | Horizontal | 2 | Pass |
| | | 1907.5 | -4.48 | 3.94 | 28.20 | 19.78 | 95.060 | Horizontal | 2 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 1855 | -4.94 | 3.79 | 28.33 | 19.60 | 91.201 | Horizontal | 2 | Pass |
| | | 1880 | -4.93 | 3.95 | 28.22 | 19.34 | 85.901 | Horizontal | 2 | Pass |
| | | 1905 | -4.40 | 3.97 | 28.19 | 19.82 | 95.940 | Horizontal | 2 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 1857.5 | -4.92 | 3.79 | 28.34 | 19.63 | 91.833 | Horizontal | 2 | Pass |
| | | 1880 | -4.71 | 3.95 | 28.22 | 19.56 | 90.365 | Horizontal | 2 | Pass |
| | | 1902.5 | -4.67 | 3.97 | 28.18 | 19.54 | 89.950 | Horizontal | 2 | Pass |
| 20.0MHz Band 16 QAM | 1/#Mid | 1860 | -4.81 | 3.81 | 28.35 | 19.73 | 93.972 | Horizontal | 2 | Pass |
| | | 1880 | -4.51 | 3.96 | 28.22 | 19.75 | 94.406 | Horizontal | 2 | Pass |
| | | 1900 | -4.33 | 4.00 | 28.16 | **19.83** | 96.161 | Horizontal | 2 | Pass |
| 1.4MHz Band 16 QAM | 1/#Mid | 1850.7 | -6.02 | 3.76 | 28.24 | 18.46 | 70.146 | Vertical | 2 | Pass |
| | | 1880 | -5.94 | 3.91 | 28.22 | 18.37 | 68.707 | Vertical | 2 | Pass |
| | | 1909.3 | -5.73 | 3.93 | 28.20 | 18.54 | 71.450 | Vertical | 2 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 1851.5 | -5.86 | 3.77 | 28.23 | 18.60 | 72.444 | Vertical | 2 | Pass |
| | | 1880 | -5.57 | 3.91 | 28.24 | 18.76 | 75.162 | Vertical | 2 | Pass |
| | | 1908.5 | -6.19 | 3.94 | 28.25 | 18.12 | 64.863 | Vertical | 2 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 1852.5 | -5.80 | 3.77 | 28.31 | 18.74 | 74.817 | Vertical | 2 | Pass |
| | | 1880 | -5.62 | 3.91 | 28.22 | 18.69 | 73.961 | Vertical | 2 | Pass |
| | | 1907.5 | -6.17 | 3.94 | 28.20 | 18.09 | 64.417 | Vertical | 2 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 1855 | -6.20 | 3.79 | 28.33 | 18.34 | 68.234 | Vertical | 2 | Pass |
| | | 1880 | -6.07 | 3.95 | 28.22 | 18.20 | 66.069 | Vertical | 2 | Pass |
| | | 1905 | -6.07 | 3.97 | 28.19 | 18.15 | 65.313 | Vertical | 2 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 1857.5 | -6.56 | 3.79 | 28.34 | 17.99 | 62.951 | Vertical | 2 | Pass |
| | | 1880 | -6.19 | 3.95 | 28.22 | 18.08 | 64.269 | Vertical | 2 | Pass |
| | | 1902.5 | -6.14 | 3.97 | 28.18 | 18.07 | 64.121 | Vertical | 2 | Pass |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 20.0MHz | 1/#Mid | 1860 | -6.11 | 3.81 | 28.35 | 18.43 | 69.663 | Vertical | 2 | Pass |
| Band 16 | | 1880 | -6.06 | 3.96 | 28.22 | 18.20 | 66.069 | Vertical | 2 | Pass |
| QAM | | 1900 | -5.74 | 4.00 | 28.16 | 18.42 | 69.502 | Vertical | 2 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

## 8.3 LTE BAND 4

| | Radiated Power (EIRP) for Band 4 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | | |
| 1.4MHz Band QPSK | 1/#Mid | 1710.7 | -4.24 | 3.12 | 27.58 | 20.22 | 105.196 | Horizontal | 1 | Pass |
| | | 1732.5 | -4.23 | 3.27 | 27.61 | 20.11 | 102.565 | Horizontal | 1 | Pass |
| | | 1754.3 | -4.21 | 3.29 | 27.63 | 20.13 | 103.039 | Horizontal | 1 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 1711.5 | -4.41 | 3.13 | 27.61 | 20.07 | 101.625 | Horizontal | 1 | Pass |
| | | 1732.5 | -4.33 | 3.27 | 27.61 | 20.01 | 100.231 | Horizontal | 1 | Pass |
| | | 1753.5 | -4.25 | 3.30 | 27.62 | 20.07 | 101.625 | Horizontal | 1 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 1712.5 | -4.18 | 3.13 | 27.63 | 20.32 | 107.647 | Horizontal | 1 | Pass |
| | | 1732.5 | -4.08 | 3.27 | 27.61 | 20.26 | 106.170 | Horizontal | 1 | Pass |
| | | 1752.5 | -3.96 | 3.30 | 27.60 | 20.34 | 108.143 | Horizontal | 1 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 1715 | -4.12 | 3.15 | 27.64 | 20.37 | 108.893 | Horizontal | 1 | Pass |
| | | 1732.5 | -3.89 | 3.31 | 27.61 | 20.41 | 109.901 | Horizontal | 1 | Pass |
| | | 1750 | -3.91 | 3.33 | 27.59 | 20.35 | 108.393 | Horizontal | 1 | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 1717.5 | -4.13 | 3.15 | 27.65 | 20.37 | 108.893 | Horizontal | 1 | Pass |
| | | 1732.5 | -3.97 | 3.31 | 27.61 | 20.33 | 107.895 | Horizontal | 1 | Pass |
| | | 1747.5 | -3.91 | 3.33 | 27.57 | 20.33 | 107.895 | Horizontal | 1 | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 1720 | -4.07 | 3.17 | 27.66 | **20.42** | 110.154 | Horizontal | 1 | Pass |
| | | 1732.5 | -3.90 | 3.32 | 27.61 | 20.39 | 109.396 | Horizontal | 1 | Pass |
| | | 1745 | -3.84 | 3.36 | 27.56 | 20.36 | 108.643 | Horizontal | 1 | Pass |
| 1.4MHz Band QPSK | 1/#Mid | 1710.7 | -5.04 | 3.12 | 27.58 | 19.42 | 87.498 | Vertical | 1 | Pass |
| | | 1732.5 | -5.42 | 3.27 | 27.61 | 18.92 | 77.983 | Vertical | 1 | Pass |
| | | 1754.3 | -5.02 | 3.29 | 27.63 | 19.32 | 85.507 | Vertical | 1 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 1711.5 | -4.94 | 3.13 | 27.61 | 19.54 | 89.950 | Vertical | 1 | Pass |
| | | 1732.5 | -4.47 | 3.27 | 27.61 | 19.87 | 97.051 | Vertical | 1 | Pass |
| | | 1753.5 | -5.31 | 3.30 | 27.62 | 19.01 | 79.616 | Vertical | 1 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 1712.5 | -4.80 | 3.13 | 27.63 | 19.70 | 93.325 | Vertical | 1 | Pass |
| | | 1732.5 | -4.64 | 3.27 | 27.61 | 19.70 | 93.325 | Vertical | 1 | Pass |
| | | 1752.5 | -4.87 | 3.30 | 27.60 | 19.43 | 87.700 | Vertical | 1 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 1715 | -5.37 | 3.15 | 27.64 | 19.12 | 81.658 | Vertical | 1 | Pass |
| | | 1732.5 | -4.86 | 3.31 | 27.61 | 19.44 | 87.902 | Vertical | 1 | Pass |
| | | 1750 | -5.04 | 3.33 | 27.59 | 19.22 | 83.560 | Vertical | 1 | Pass |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 15.0MHz | | 1717.5 | -5.57 | 3.15 | 27.65 | 18.93 | 78.163 | Vertical | 1 | Pass |
| Band | 1/#Mid | 1732.5 | -5.14 | 3.31 | 27.61 | 19.16 | 82.414 | Vertical | 1 | Pass |
| QPSK | | 1747.5 | -5.30 | 3.33 | 27.57 | 18.94 | 78.343 | Vertical | 1 | Pass |
| 20.0MHz | | 1720 | -5.53 | 3.17 | 27.66 | 18.96 | 78.705 | Vertical | 1 | Pass |
| Band | 1/#Mid | 1732.5 | -4.48 | 3.32 | 27.61 | 19.81 | 95.719 | Vertical | 1 | Pass |
| QPSK | | 1745 | -5.09 | 3.36 | 27.56 | 19.11 | 81.470 | Vertical | 1 | Pass |

| | Radiated Power (EIRP) for Band 4 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 1.4MHz Band 16 QAM | 1/#Mid | 1710.7 | -5.05 | 3.12 | 27.58 | 19.41 | 87.297 | Horizontal | 1 | Pass |
| | | 1732.5 | -4.90 | 3.27 | 27.61 | 19.44 | 87.902 | Horizontal | 1 | Pass |
| | | 1754.3 | -4.90 | 3.29 | 27.63 | 19.44 | 87.902 | Horizontal | 1 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 1711.5 | -4.99 | 3.13 | 27.61 | 19.49 | 88.920 | Horizontal | 1 | Pass |
| | | 1732.5 | -5.12 | 3.27 | 27.61 | 19.22 | 83.560 | Horizontal | 1 | Pass |
| | | 1753.5 | -5.34 | 3.30 | 27.62 | 18.98 | 79.068 | Horizontal | 1 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 1712.5 | -4.82 | 3.13 | 27.63 | 19.68 | 92.897 | Horizontal | 1 | Pass |
| | | 1732.5 | -4.78 | 3.27 | 27.61 | 19.56 | 90.365 | Horizontal | 1 | Pass |
| | | 1752.5 | -4.47 | 3.30 | 27.60 | 19.83 | 96.161 | Horizontal | 1 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 1715 | -4.89 | 3.15 | 27.64 | 19.60 | 91.201 | Horizontal | 1 | Pass |
| | | 1732.5 | -5.08 | 3.31 | 27.61 | 19.22 | 83.560 | Horizontal | 1 | Pass |
| | | 1750 | -4.46 | 3.33 | 27.59 | 19.80 | 95.499 | Horizontal | 1 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 1717.5 | -4.69 | 3.15 | 27.65 | 19.81 | 95.719 | Horizontal | 1 | Pass |
| | | 1732.5 | -4.75 | 3.31 | 27.61 | 19.55 | 90.157 | Horizontal | 1 | Pass |
| | | 1747.5 | -4.77 | 3.33 | 27.57 | 19.47 | 88.512 | Horizontal | 1 | Pass |
| 20.0MHz Band 16 QAM | 1/#Mid | 1720 | -4.64 | 3.17 | 27.66 | **19.85** | 96.605 | Horizontal | 1 | Pass |
| | | 1732.5 | -4.65 | 3.32 | 27.61 | 19.64 | 92.045 | Horizontal | 1 | Pass |
| | | 1745 | -4.46 | 3.36 | 27.56 | 19.74 | 94.189 | Horizontal | 1 | Pass |
| 1.4MHz Band 16 QAM | 1/#Mid | 1710.7 | -5.69 | 3.12 | 27.58 | 18.77 | 75.336 | Vertical | 1 | Pass |
| | | 1732.5 | -5.95 | 3.27 | 27.61 | 18.39 | 69.024 | Vertical | 1 | Pass |
| | | 1754.3 | -6.19 | 3.29 | 27.63 | 18.15 | 65.313 | Vertical | 1 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 1711.5 | -5.88 | 3.13 | 27.61 | 18.60 | 72.444 | Vertical | 1 | Pass |
| | | 1732.5 | -5.78 | 3.27 | 27.61 | 18.56 | 71.779 | Vertical | 1 | Pass |
| | | 1753.5 | -5.82 | 3.30 | 27.62 | 18.50 | 70.795 | Vertical | 1 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 1712.5 | -6.44 | 3.13 | 27.63 | 18.06 | 63.973 | Vertical | 1 | Pass |
| | | 1732.5 | -6.15 | 3.27 | 27.61 | 18.19 | 65.917 | Vertical | 1 | Pass |
| | | 1752.5 | -5.76 | 3.30 | 27.60 | 18.54 | 71.450 | Vertical | 1 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 1715 | -6.57 | 3.15 | 27.64 | 17.92 | 61.944 | Vertical | 1 | Pass |
| | | 1732.5 | -5.91 | 3.31 | 27.61 | 18.39 | 69.024 | Vertical | 1 | Pass |
| | | 1750 | -6.04 | 3.33 | 27.59 | 18.22 | 66.374 | Vertical | 1 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 1717.5 | -6.47 | 3.15 | 27.65 | 18.03 | 63.533 | Vertical | 1 | Pass |
| | | 1732.5 | -6.39 | 3.31 | 27.61 | 17.91 | 61.802 | Vertical | 1 | Pass |
| | | 1747.5 | -6.36 | 3.33 | 27.57 | 17.88 | 61.376 | Vertical | 1 | Pass |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 20.0MHz | 1/#Mid | 1720 | -5.93 | 3.17 | 27.66 | 18.56 | 71.779 | Vertical | 1 | Pass |
| Band 16 | | 1732.5 | -6.11 | 3.32 | 27.61 | 18.18 | 65.766 | Vertical | 1 | Pass |
| QAM | | 1745 | -5.77 | 3.36 | 27.56 | 18.43 | 69.663 | Vertical | 1 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

## 8.4 LTE BAND 5

| | Radiated Power (ERP) for Band 5 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | |
| 1.4MHz Band QPSK | 3/#Mid | 824.7 | 5.06 | 2.01 | 19.68 | 2.15 | 20.58 | 114.288 | Horizontal | 7 | Pass |
| | | 836.5 | 4.94 | 2.01 | 19.77 | 2.15 | 20.55 | 113.501 | Horizontal | 7 | Pass |
| | | 848.3 | 4.74 | 2.02 | 19.82 | 2.15 | 20.39 | 109.396 | Horizontal | 7 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 825.5 | 4.83 | 2.01 | 19.70 | 2.15 | 20.37 | 108.893 | Horizontal | 7 | Pass |
| | | 836.5 | 4.73 | 2.01 | 19.77 | 2.15 | 20.34 | 108.143 | Horizontal | 7 | Pass |
| | | 847.5 | 4.60 | 2.02 | 19.81 | 2.15 | 20.24 | 105.682 | Horizontal | 7 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 826.5 | 5.11 | 2.01 | 19.71 | 2.15 | 20.66 | 116.413 | Horizontal | 7 | Pass |
| | | 836.5 | 4.99 | 2.01 | 19.77 | 2.15 | 20.60 | 114.815 | Horizontal | 7 | Pass |
| | | 846.5 | 4.83 | 2.02 | 19.79 | 2.15 | 20.45 | 110.917 | Horizontal | 7 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 829 | 5.13 | 2.01 | 19.73 | 2.15 | **20.70** | 117.490 | Horizontal | 7 | Pass |
| | | 836.5 | 5.08 | 2.01 | 19.77 | 2.15 | 20.69 | 117.220 | Horizontal | 7 | Pass |
| | | 844 | 4.98 | 2.02 | 19.78 | 2.15 | 20.59 | 114.551 | Horizontal | 7 | Pass |
| 1.4MHz Band QPSK | 1/#Mid | 824.7 | 3.65 | 2.01 | 19.68 | 2.15 | 19.17 | 82.604 | Vertical | 7 | Pass |
| | | 836.5 | 3.69 | 2.01 | 19.77 | 2.15 | 19.30 | 85.114 | Vertical | 7 | Pass |
| | | 848.3 | 4.02 | 2.02 | 19.82 | 2.15 | 19.67 | 92.683 | Vertical | 7 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 825.5 | 4.33 | 2.01 | 19.70 | 2.15 | 19.87 | 97.051 | Vertical | 7 | Pass |
| | | 836.5 | 3.82 | 2.01 | 19.77 | 2.15 | 19.43 | 87.700 | Vertical | 7 | Pass |
| | | 847.5 | 3.84 | 2.02 | 19.81 | 2.15 | 19.48 | 88.716 | Vertical | 7 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 826.5 | 3.57 | 2.01 | 19.71 | 2.15 | 19.12 | 81.658 | Vertical | 7 | Pass |
| | | 836.5 | 3.77 | 2.01 | 19.77 | 2.15 | 19.38 | 86.696 | Vertical | 7 | Pass |
| | | 846.5 | 3.84 | 2.02 | 19.79 | 2.15 | 19.46 | 88.308 | Vertical | 7 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 829 | 3.43 | 2.01 | 19.73 | 2.15 | 19.00 | 79.433 | Vertical | 7 | Pass |
| | | 836.5 | 4.01 | 2.01 | 19.77 | 2.15 | 19.62 | 91.622 | Vertical | 7 | Pass |
| | | 844 | 4.24 | 2.02 | 19.78 | 2.15 | 19.85 | 96.605 | Vertical | 7 | Pass |

| | Radiated Power (ERP) for Band 5 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | |
| 1.4MHz Band 16 QAM | 3/#Mid | 824.7 | 4.21 | 2.01 | 19.68 | 2.15 | 19.73 | 93.972 | Horizontal | 7 | Pass |
| | | 836.5 | 4.14 | 2.01 | 19.77 | 2.15 | 19.75 | 94.406 | Horizontal | 7 | Pass |
| | | 848.3 | 3.98 | 2.02 | 19.82 | 2.15 | 19.63 | 91.833 | Horizontal | 7 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 825.5 | 4.29 | 2.01 | 19.70 | 2.15 | 19.83 | 96.161 | Horizontal | 7 | Pass |
| | | 836.5 | 4.00 | 2.01 | 19.77 | 2.15 | 19.61 | 91.411 | Horizontal | 7 | Pass |
| | | 847.5 | 3.48 | 2.02 | 19.81 | 2.15 | 19.12 | 81.658 | Horizontal | 7 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 826.5 | 4.61 | 2.01 | 19.71 | 2.15 | 20.16 | 103.753 | Horizontal | 7 | Pass |
| | | 836.5 | 4.38 | 2.01 | 19.77 | 2.15 | 19.99 | 99.770 | Horizontal | 7 | Pass |
| | | 846.5 | 4.13 | 2.02 | 19.79 | 2.15 | 19.75 | 94.406 | Horizontal | 7 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 829 | 4.61 | 2.01 | 19.73 | 2.15 | **20.18** | 104.232 | Horizontal | 7 | Pass |
| | | 836.5 | 4.33 | 2.01 | 19.77 | 2.15 | 19.94 | 98.628 | Horizontal | 7 | Pass |
| | | 844 | 3.87 | 2.02 | 19.78 | 2.15 | 19.48 | 88.716 | Horizontal | 7 | Pass |
| 1.4MHz Band 16 QAM | 1/#Mid | 824.7 | 3.35 | 2.01 | 19.68 | 2.15 | 18.87 | 77.090 | Vertical | 7 | Pass |
| | | 836.5 | 4.26 | 2.01 | 19.77 | 2.15 | 19.87 | 97.051 | Vertical | 7 | Pass |
| | | 848.3 | 3.78 | 2.02 | 19.82 | 2.15 | 19.43 | 87.700 | Vertical | 7 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 825.5 | 3.66 | 2.01 | 19.70 | 2.15 | 19.20 | 83.176 | Vertical | 7 | Pass |
| | | 836.5 | 2.60 | 2.01 | 19.77 | 2.15 | 18.21 | 66.222 | Vertical | 7 | Pass |
| | | 847.5 | 3.27 | 2.02 | 19.81 | 2.15 | 18.91 | 77.804 | Vertical | 7 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 826.5 | 3.31 | 2.01 | 19.71 | 2.15 | 18.86 | 76.913 | Vertical | 7 | Pass |
| | | 836.5 | 2.85 | 2.01 | 19.77 | 2.15 | 18.46 | 70.146 | Vertical | 7 | Pass |
| | | 846.5 | 2.27 | 2.02 | 19.79 | 2.15 | 17.89 | 61.518 | Vertical | 7 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 829 | 2.82 | 2.01 | 19.73 | 2.15 | 18.39 | 69.024 | Vertical | 7 | Pass |
| | | 836.5 | 2.69 | 2.01 | 19.77 | 2.15 | 18.30 | 67.608 | Vertical | 7 | Pass |
| | | 844 | 3.09 | 2.02 | 19.78 | 2.15 | 18.70 | 74.131 | Vertical | 7 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

## 8.5 LTE BAND 7

| | Radiated Power (EIRP) for Band 7 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 5.0MHz Band QPSK | 1/#Mid | 2502.5 | -2.52 | 4.54 | 27.75 | 20.69 | 117.220 | Horizontal | 2 | Pass |
| | | 2535 | -2.35 | 4.69 | 27.72 | 20.68 | 116.950 | Horizontal | 2 | Pass |
| | | 2567.5 | -2.28 | 4.71 | 27.71 | 20.72 | 118.032 | Horizontal | 2 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 2505 | -2.45 | 4.55 | 27.76 | 20.76 | 119.124 | Horizontal | 2 | Pass |
| | | 2535 | -2.26 | 4.69 | 27.72 | 20.77 | 119.399 | Horizontal | 2 | Pass |
| | | 2565 | -2.18 | 4.72 | 27.70 | 20.80 | 120.226 | Horizontal | 2 | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 2507.5 | -2.46 | 4.55 | 27.77 | 20.76 | 119.124 | Horizontal | 2 | Pass |
| | | 2535 | -2.32 | 4.69 | 27.72 | 20.71 | 117.761 | Horizontal | 2 | Pass |
| | | 2562.5 | -2.22 | 4.72 | 27.69 | 20.75 | 118.850 | Horizontal | 2 | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 2510 | -2.40 | 4.57 | 27.78 | **20.81** | 120.504 | Horizontal | 2 | Pass |
| | | 2535 | -2.22 | 4.73 | 27.72 | 20.77 | 119.399 | Horizontal | 2 | Pass |
| | | 2560 | -2.18 | 4.75 | 27.68 | 20.75 | 118.850 | Horizontal | 2 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 2502.5 | -4.32 | 4.54 | 27.75 | 18.89 | 77.446 | Vertical | 2 | Pass |
| | | 2535 | -4.09 | 4.69 | 27.72 | 18.94 | 78.343 | Vertical | 2 | Pass |
| | | 2567.5 | -3.44 | 4.71 | 27.71 | 19.56 | 90.365 | Vertical | 2 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 2505 | -3.72 | 4.55 | 27.76 | 19.49 | 88.920 | Vertical | 2 | Pass |
| | | 2535 | -3.38 | 4.69 | 27.72 | 19.65 | 92.257 | Vertical | 2 | Pass |
| | | 2565 | -3.99 | 4.72 | 27.70 | 18.99 | 79.250 | Vertical | 2 | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 2507.5 | -3.62 | 4.55 | 27.77 | 19.60 | 91.201 | Vertical | 2 | Pass |
| | | 2535 | -3.32 | 4.69 | 27.72 | 19.71 | 93.541 | Vertical | 2 | Pass |
| | | 2562.5 | -4.10 | 4.72 | 27.69 | 18.87 | 77.090 | Vertical | 2 | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 2510 | -3.41 | 4.57 | 27.78 | 19.80 | 95.499 | Vertical | 2 | Pass |
| | | 2535 | -3.87 | 4.73 | 27.72 | 19.12 | 81.658 | Vertical | 2 | Pass |
| | | 2560 | -4.05 | 4.75 | 27.68 | 18.88 | 77.268 | Vertical | 2 | Pass |

| | Radiated Power (EIRP) for Band 7 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 5.0MHz Band 16 QAM | 1/#Mid | 2502.5 | -3.21 | 4.54 | 27.75 | 20.00 | 100.000 | Horizontal | 2 | Pass |
| | | 2535 | -2.90 | 4.69 | 27.72 | 20.13 | 103.039 | Horizontal | 2 | Pass |
| | | 2567.5 | -2.98 | 4.71 | 27.71 | 20.02 | 100.462 | Horizontal | 2 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 2505 | -3.10 | 4.55 | 27.76 | 20.11 | 102.565 | Horizontal | 2 | Pass |
| | | 2535 | -3.11 | 4.69 | 27.72 | 19.92 | 98.175 | Horizontal | 2 | Pass |
| | | 2565 | -3.38 | 4.72 | 27.70 | 19.60 | 91.201 | Horizontal | 2 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 2507.5 | -3.28 | 4.55 | 27.77 | 19.94 | 98.628 | Horizontal | 2 | Pass |
| | | 2535 | -3.25 | 4.69 | 27.72 | 19.78 | 95.060 | Horizontal | 2 | Pass |
| | | 2562.5 | -2.86 | 4.72 | 27.69 | 20.11 | 102.565 | Horizontal | 2 | Pass |
| 20.0MHz Band 16 QAM | 1/#Mid | 2510 | -3.16 | 4.57 | 27.78 | 20.05 | 101.158 | Horizontal | 2 | Pass |
| | | 2535 | -2.83 | 4.73 | 27.72 | **20.16** | 103.753 | Horizontal | 2 | Pass |
| | | 2560 | -2.93 | 4.75 | 27.68 | 20.00 | 100.000 | Horizontal | 2 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 2502.5 | -4.58 | 4.54 | 27.75 | 18.63 | 72.946 | Vertical | 2 | Pass |
| | | 2535 | -4.66 | 4.69 | 27.72 | 18.37 | 68.707 | Vertical | 2 | Pass |
| | | 2567.5 | -3.36 | 4.71 | 27.71 | 19.64 | 92.045 | Vertical | 2 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 2505 | -3.47 | 4.55 | 27.76 | 19.74 | 94.189 | Vertical | 2 | Pass |
| | | 2535 | -3.91 | 4.69 | 27.72 | 19.12 | 81.658 | Vertical | 2 | Pass |
| | | 2565 | -3.95 | 4.72 | 27.70 | 19.03 | 79.983 | Vertical | 2 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 2507.5 | -3.85 | 4.55 | 27.77 | 19.37 | 86.497 | Vertical | 2 | Pass |
| | | 2535 | -4.11 | 4.69 | 27.72 | 18.92 | 77.983 | Vertical | 2 | Pass |
| | | 2562.5 | -4.29 | 4.72 | 27.69 | 18.68 | 73.790 | Vertical | 2 | Pass |
| 20.0MHz Band 16 QAM | 1/#Mid | 2510 | -4.84 | 4.57 | 27.78 | 18.37 | 68.707 | Vertical | 2 | Pass |
| | | 2535 | -4.59 | 4.73 | 27.72 | 18.40 | 69.183 | Vertical | 2 | Pass |
| | | 2560 | -3.70 | 4.75 | 27.68 | 19.23 | 83.753 | Vertical | 2 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Factor (dB)+ SG Level (dBm)- Cable Loss(dBm)

## 8.6 LTE BAND 12

| | Radiated Power (ERP) for Band 12 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | | |
| 1.4MHz Band QPSK | 1/#Mid | 699.7 | 5.43 | 1.91 | 19.21 | 2.15 | 20.58 | 114.288 | Vertical | 3 | Pass |
| | | 707.5 | 5.35 | 1.91 | 19.26 | 2.15 | 20.55 | 113.501 | Vertical | 3 | Pass |
| | | 715.3 | 5.13 | 1.93 | 19.34 | 2.15 | 20.39 | 109.396 | Vertical | 3 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 700.5 | 5.22 | 1.91 | 19.21 | 2.15 | 20.37 | 108.893 | Vertical | 3 | Pass |
| | | 707.5 | 5.14 | 1.91 | 19.26 | 2.15 | 20.34 | 108.143 | Vertical | 3 | Pass |
| | | 714.5 | 4.98 | 1.93 | 19.34 | 2.15 | 20.24 | 105.682 | Vertical | 3 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 701.5 | 5.49 | 1.91 | 19.23 | 2.15 | 20.66 | 116.413 | Vertical | 3 | Pass |
| | | 707.5 | 5.40 | 1.91 | 19.26 | 2.15 | 20.60 | 114.815 | Vertical | 3 | Pass |
| | | 713.5 | 5.19 | 1.92 | 19.33 | 2.15 | 20.45 | 110.917 | Vertical | 3 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 704 | 5.51 | 1.91 | 19.25 | 2.15 | **20.70** | 117.490 | Vertical | 3 | Pass |
| | | 707.5 | 5.49 | 1.91 | 19.26 | 2.15 | 20.69 | 117.220 | Vertical | 3 | Pass |
| | | 711 | 5.34 | 1.92 | 19.32 | 2.15 | 20.59 | 114.551 | Vertical | 3 | Pass |
| 1.4MHz Band QPSK | 1/#Mid | 699.7 | 4.35 | 1.91 | 19.21 | 2.15 | 19.50 | 89.125 | Horizontal | 3 | Pass |
| | | 707.5 | 4.66 | 1.91 | 19.26 | 2.15 | 19.86 | 96.828 | Horizontal | 3 | Pass |
| | | 715.3 | 4.50 | 1.93 | 19.34 | 2.15 | 19.76 | 94.624 | Horizontal | 3 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 700.5 | 3.73 | 1.91 | 19.21 | 2.15 | 18.88 | 77.268 | Horizontal | 3 | Pass |
| | | 707.5 | 3.77 | 1.91 | 19.26 | 2.15 | 18.97 | 78.886 | Horizontal | 3 | Pass |
| | | 714.5 | 3.91 | 1.93 | 19.34 | 2.15 | 19.17 | 82.604 | Horizontal | 3 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 701.5 | 4.28 | 1.91 | 19.23 | 2.15 | 19.45 | 88.105 | Horizontal | 3 | Pass |
| | | 707.5 | 3.96 | 1.91 | 19.26 | 2.15 | 19.16 | 82.414 | Horizontal | 3 | Pass |
| | | 713.5 | 4.29 | 1.92 | 19.33 | 2.15 | 19.55 | 90.157 | Horizontal | 3 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 704 | 4.51 | 1.91 | 19.25 | 2.15 | 19.70 | 93.325 | Horizontal | 3 | Pass |
| | | 707.5 | 4.18 | 1.91 | 19.26 | 2.15 | 19.38 | 86.696 | Horizontal | 3 | Pass |
| | | 711 | 4.37 | 1.92 | 19.32 | 2.15 | 19.62 | 91.622 | Horizontal | 3 | Pass |

| | Radiated Power (ERP) for Band 12 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | Polarization Of Max. ERP | Limit | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | (W) | |
| 1.4MHz Band 16 QAM | 1/#Mid | 699.7 | 5.37 | 1.91 | 19.21 | 2.15 | 20.52 | 112.720 | Vertical | 3 | Pass |
| | | 707.5 | 5.29 | 1.91 | 19.26 | 2.15 | 20.49 | 111.944 | Vertical | 3 | Pass |
| | | 715.3 | 5.07 | 1.93 | 19.34 | 2.15 | 20.33 | 107.895 | Vertical | 3 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 700.5 | 5.16 | 1.91 | 19.21 | 2.15 | 20.31 | 107.399 | Vertical | 3 | Pass |
| | | 707.5 | 5.08 | 1.91 | 19.26 | 2.15 | 20.28 | 106.660 | Vertical | 3 | Pass |
| | | 714.5 | 4.92 | 1.93 | 19.34 | 2.15 | 20.18 | 104.232 | Vertical | 3 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 701.5 | 5.43 | 1.91 | 19.23 | 2.15 | 20.60 | 114.815 | Vertical | 3 | Pass |
| | | 707.5 | 5.34 | 1.91 | 19.26 | 2.15 | 20.54 | 113.240 | Vertical | 3 | Pass |
| | | 713.5 | 5.13 | 1.92 | 19.33 | 2.15 | 20.39 | 109.396 | Vertical | 3 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 704 | 5.45 | 1.91 | 19.25 | 2.15 | **20.64** | 115.878 | Vertical | 3 | Pass |
| | | 707.5 | 5.43 | 1.91 | 19.26 | 2.15 | 20.63 | 115.611 | Vertical | 3 | Pass |
| | | 711 | 5.28 | 1.92 | 19.32 | 2.15 | 20.53 | 112.980 | Vertical | 3 | Pass |
| 1.4MHz Band 16 QAM | 1/#Mid | 699.7 | 4.01 | 1.91 | 19.21 | 2.15 | 19.16 | 82.414 | Horizontal | 3 | Pass |
| | | 707.5 | 4.03 | 1.91 | 19.26 | 2.15 | 19.23 | 83.753 | Horizontal | 3 | Pass |
| | | 715.3 | 4.08 | 1.93 | 19.34 | 2.15 | 19.34 | 85.901 | Horizontal | 3 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 700.5 | 4.07 | 1.91 | 19.21 | 2.15 | 19.22 | 83.560 | Horizontal | 3 | Pass |
| | | 707.5 | 4.18 | 1.91 | 19.26 | 2.15 | 19.38 | 86.696 | Horizontal | 3 | Pass |
| | | 714.5 | 3.91 | 1.93 | 19.34 | 2.15 | 19.17 | 82.604 | Horizontal | 3 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 701.5 | 4.41 | 1.91 | 19.23 | 2.15 | 19.58 | 90.782 | Horizontal | 3 | Pass |
| | | 707.5 | 4.25 | 1.91 | 19.26 | 2.15 | 19.45 | 88.105 | Horizontal | 3 | Pass |
| | | 713.5 | 4.41 | 1.92 | 19.33 | 2.15 | 19.67 | 92.683 | Horizontal | 3 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 704 | 3.89 | 1.91 | 19.25 | 2.15 | 19.08 | 80.910 | Horizontal | 3 | Pass |
| | | 707.5 | 3.66 | 1.91 | 19.26 | 2.15 | 18.86 | 76.913 | Horizontal | 3 | Pass |
| | | 711 | 3.82 | 1.92 | 19.32 | 2.15 | 19.07 | 80.724 | Horizontal | 3 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

## 8.7 LTE BAND 17

| | Radiated Power (ERP) for Band 17 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | |
| 5.0MHz Band QPSK | 1/#Mid | 706.5 | 5.83 | 1.91 | 19.23 | 2.15 | 21.00 | 125.893 | Vertical | 3 | Pass |
| | | 710 | 5.69 | 1.91 | 19.26 | 2.15 | 20.89 | 122.744 | Vertical | 3 | Pass |
| | | 713.5 | 5.59 | 1.92 | 19.33 | 2.15 | 20.85 | 121.619 | Vertical | 3 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 709 | 5.84 | 1.91 | 19.25 | 2.15 | **21.03** | 126.765 | Vertical | 3 | Pass |
| | | 710 | 5.79 | 1.91 | 19.26 | 2.15 | 20.99 | 125.603 | Vertical | 3 | Pass |
| | | 711 | 5.75 | 1.92 | 19.32 | 2.15 | 21.00 | 125.893 | Vertical | 3 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 706.5 | 4.40 | 1.91 | 19.23 | 2.15 | 19.57 | 90.573 | Horizontal | 3 | Pass |
| | | 710 | 4.22 | 1.91 | 19.26 | 2.15 | 19.42 | 87.498 | Horizontal | 3 | Pass |
| | | 713.5 | 4.63 | 1.92 | 19.33 | 2.15 | 19.89 | 97.499 | Horizontal | 3 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 709 | 5.44 | 1.91 | 19.25 | 2.15 | 20.63 | 115.611 | Horizontal | 3 | Pass |
| | | 710 | 5.10 | 1.91 | 19.26 | 2.15 | 20.30 | 107.152 | Horizontal | 3 | Pass |
| | | 711 | 4.19 | 1.92 | 19.32 | 2.15 | 19.44 | 87.902 | Horizontal | 3 | Pass |

| | Radiated Power (ERP) for Band 17 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | | |
| 5.0MHz Band 16 QAM | 1/#Mid | 706.5 | 5.16 | 1.91 | 19.23 | 2.15 | 20.33 | 107.895 | Vertical | 3 | Pass |
| | | 710 | 5.07 | 1.91 | 19.26 | 2.15 | 20.27 | 106.414 | Vertical | 3 | Pass |
| | | 713.5 | 4.87 | 1.92 | 19.33 | 2.15 | 20.13 | 103.039 | Vertical | 3 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 709 | 4.70 | 1.91 | 19.25 | 2.15 | 19.89 | 97.499 | Vertical | 3 | Pass |
| | | 710 | 5.23 | 1.91 | 19.26 | 2.15 | **20.43** | 110.408 | Vertical | 3 | Pass |
| | | 711 | 4.96 | 1.92 | 19.32 | 2.15 | 20.21 | 104.954 | Vertical | 3 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 706.5 | 4.25 | 1.91 | 19.23 | 2.15 | 19.42 | 87.498 | Horizontal | 3 | Pass |
| | | 710 | 4.11 | 1.91 | 19.26 | 2.15 | 19.31 | 85.310 | Horizontal | 3 | Pass |
| | | 713.5 | 3.70 | 1.92 | 19.33 | 2.15 | 18.96 | 78.705 | Horizontal | 3 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 709 | 3.80 | 1.91 | 19.25 | 2.15 | 18.99 | 79.250 | Horizontal | 3 | Pass |
| | | 710 | 3.60 | 1.91 | 19.26 | 2.15 | 18.80 | 75.858 | Horizontal | 3 | Pass |
| | | 711 | 3.84 | 1.92 | 19.32 | 2.15 | 19.09 | 81.096 | Horizontal | 3 | Pass |

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Factor (dB)+ SG Level (dBm)- Cable Loss(dBm)

## 8.8 LTE BAND 25

| | Radiated Power (EIRP) for Band 25 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | (W) | |
| 1.4MHz Band QPSK | 1/#Mid | 1850.7 | -3.93 | 3.12 | 27.58 | 20.53 | 112.980 | Horizontal | 2 | Pass |
| | | 1882,5 | -3.84 | 3.27 | 27.61 | 20.50 | 112.202 | Horizontal | 2 | Pass |
| | | 1914.3 | -4.00 | 3.29 | 27.63 | 20.34 | 108.143 | Horizontal | 2 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 1851.5 | -4.16 | 3.13 | 27.61 | 20.32 | 107.647 | Horizontal | 2 | Pass |
| | | 1882,5 | -4.05 | 3.27 | 27.61 | 20.29 | 106.905 | Horizontal | 2 | Pass |
| | | 1913.5 | -4.13 | 3.30 | 27.62 | 20.19 | 104.472 | Horizontal | 2 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 1852.5 | -3.89 | 3.13 | 27.63 | 20.61 | 115.080 | Horizontal | 2 | Pass |
| | | 1882,5 | -3.79 | 3.27 | 27.61 | 20.55 | 113.501 | Horizontal | 2 | Pass |
| | | 1912.5 | -3.90 | 3.30 | 27.60 | 20.40 | 109.648 | Horizontal | 2 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 1855 | -3.84 | 3.15 | 27.64 | 20.65 | 116.145 | Horizontal | 2 | Pass |
| | | 1882,5 | -3.66 | 3.31 | 27.61 | 20.64 | 115.878 | Horizontal | 2 | Pass |
| | | 1910 | -3.72 | 3.33 | 27.59 | 20.54 | 113.240 | Horizontal | 2 | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 1857.5 | -5.21 | 3.15 | 27.65 | 19.29 | 84.918 | Horizontal | 2 | Pass |
| | | 1882,5 | -5.04 | 3.31 | 27.61 | 19.26 | 84.333 | Horizontal | 2 | Pass |
| | | 1907.5 | -5.18 | 3.33 | 27.57 | 19.06 | 80.538 | Horizontal | 2 | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 1860 | -5.39 | 3.17 | 27.66 | 19.10 | 81.283 | Horizontal | 2 | Pass |
| | | 1882,5 | -3.63 | 3.32 | 27.61 | 20.66 | 116.413 | Horizontal | 2 | Pass |
| | | 1905 | -3.44 | 3.36 | 27.56 | **20.76** | 119.124 | Horizontal | 2 | Pass |
| 1.4MHz Band QPSK | 1/#Mid | 1850.7 | -4.96 | 3.12 | 27.58 | 19.50 | 89.125 | Vertical | 2 | Pass |
| | | 1882,5 | -4.70 | 3.27 | 27.61 | 19.64 | 92.045 | Vertical | 2 | Pass |
| | | 1914.3 | -4.84 | 3.29 | 27.63 | 19.50 | 89.125 | Vertical | 2 | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 1851.5 | -4.74 | 3.13 | 27.61 | 19.74 | 94.189 | Vertical | 2 | Pass |
| | | 1882,5 | -4.98 | 3.27 | 27.61 | 19.36 | 86.298 | Vertical | 2 | Pass |
| | | 1913.5 | -4.97 | 3.30 | 27.62 | 19.35 | 86.099 | Vertical | 2 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 1852.5 | -4.75 | 3.13 | 27.63 | 19.75 | 94.406 | Vertical | 2 | Pass |
| | | 1882,5 | -5.30 | 3.27 | 27.61 | 19.04 | 80.168 | Vertical | 2 | Pass |
| | | 1912.5 | -4.61 | 3.30 | 27.60 | 19.69 | 93.111 | Vertical | 2 | Pass |
| 10.0MHz Band | 1/#Mid | 1855 | -5.30 | 3.15 | 27.64 | 19.19 | 82.985 | Vertical | 2 | Pass |
| | | 1882,5 | -4.76 | 3.31 | 27.61 | 19.54 | 89.950 | Vertical | 2 | Pass |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| QPSK | | 1910 | -5.02 | 3.33 | 27.59 | 19.24 | 83.946 | Vertical | 2 | Pass |
| 15.0MHz | | 1857.5 | -5.53 | 3.15 | 27.65 | 18.97 | 78.886 | Vertical | 2 | Pass |
| Band | 1/#Mid | 1882,5 | -4.84 | 3.31 | 27.61 | 19.46 | 88.308 | Vertical | 2 | Pass |
| QPSK | | 1907.5 | -4.58 | 3.33 | 27.57 | 19.66 | 92.470 | Vertical | 2 | Pass |
| 20.0MHz | | 1860 | -5.32 | 3.17 | 27.66 | 19.17 | 82.604 | Vertical | 2 | Pass |
| Band | 1/#Mid | 1882,5 | -4.66 | 3.32 | 27.61 | 19.63 | 91.833 | Vertical | 2 | Pass |
| QPSK | | 1905 | -5.24 | 3.36 | 27.56 | 18.96 | 78.705 | Vertical | 2 | Pass |

| | Radiated Power (EIRP) for Band 25 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 1.4MHz Band 16 QAM | 1/#Mid | 1850.7 | -3.74 | 3.12 | 27.58 | 20.72 | 118.032 | Horizontal | 2 | Pass |
| | | 1882,5 | -3.65 | 3.27 | 27.61 | 20.69 | 117.220 | Horizontal | 2 | Pass |
| | | 1914.3 | -3.81 | 3.29 | 27.63 | 20.53 | 112.980 | Horizontal | 2 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 1851.5 | -3.97 | 3.13 | 27.61 | 20.51 | 112.460 | Horizontal | 2 | Pass |
| | | 1882,5 | -3.86 | 3.27 | 27.61 | 20.48 | 111.686 | Horizontal | 2 | Pass |
| | | 1913.5 | -3.94 | 3.30 | 27.62 | 20.38 | 109.144 | Horizontal | 2 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 1852.5 | -3.70 | 3.13 | 27.63 | 20.80 | 120.226 | Horizontal | 2 | Pass |
| | | 1882,5 | -3.60 | 3.27 | 27.61 | 20.74 | 118.577 | Horizontal | 2 | Pass |
| | | 1912.5 | -3.71 | 3.30 | 27.60 | 20.59 | 114.551 | Horizontal | 2 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 1855 | -3.65 | 3.15 | 27.64 | 20.84 | 121.339 | Horizontal | 2 | Pass |
| | | 1882,5 | -3.47 | 3.31 | 27.61 | 20.83 | 121.060 | Horizontal | 2 | Pass |
| | | 1910 | -3.34 | 3.33 | 27.59 | **20.92** | 123.595 | Horizontal | 2 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 1857.5 | -4.70 | 3.15 | 27.65 | 19.80 | 95.499 | Horizontal | 2 | Pass |
| | | 1882,5 | -4.94 | 3.31 | 27.61 | 19.36 | 86.298 | Horizontal | 2 | Pass |
| | | 1907.5 | -4.90 | 3.33 | 27.57 | 19.34 | 85.901 | Horizontal | 2 | Pass |
| 20.0MHz Band 16 QAM | 1/#Mid | 1860 | -5.36 | 3.17 | 27.66 | 19.13 | 81.846 | Horizontal | 2 | Pass |
| | | 1882,5 | -4.41 | 3.32 | 27.61 | 19.88 | 97.275 | Horizontal | 2 | Pass |
| | | 1905 | -5.08 | 3.36 | 27.56 | 19.12 | 81.658 | Horizontal | 2 | Pass |
| 1.4MHz Band 16 QAM | 1/#Mid | 1850.7 | -5.07 | 3.12 | 27.58 | 19.39 | 86.896 | Vertical | 2 | Pass |
| | | 1882,5 | -4.62 | 3.27 | 27.61 | 19.72 | 93.756 | Vertical | 2 | Pass |
| | | 1914.3 | -5.28 | 3.29 | 27.63 | 19.06 | 80.538 | Vertical | 2 | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 1851.5 | -5.09 | 3.13 | 27.61 | 19.39 | 86.896 | Vertical | 2 | Pass |
| | | 1882,5 | -4.97 | 3.27 | 27.61 | 19.37 | 86.497 | Vertical | 2 | Pass |
| | | 1913.5 | -4.93 | 3.30 | 27.62 | 19.39 | 86.896 | Vertical | 2 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 1852.5 | -4.91 | 3.13 | 27.63 | 19.59 | 90.991 | Vertical | 2 | Pass |
| | | 1882,5 | -5.22 | 3.27 | 27.61 | 19.12 | 81.658 | Vertical | 2 | Pass |
| | | 1912.5 | -4.46 | 3.30 | 27.60 | 19.84 | 96.383 | Vertical | 2 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 1855 | -5.21 | 3.15 | 27.64 | 19.28 | 84.723 | Vertical | 2 | Pass |
| | | 1882,5 | -4.53 | 3.31 | 27.61 | 19.77 | 94.842 | Vertical | 2 | Pass |
| | | 1910 | -4.34 | 3.33 | 27.59 | 19.92 | 98.175 | Vertical | 2 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 1857.5 | -4.69 | 3.15 | 27.65 | 19.81 | 95.719 | Vertical | 2 | Pass |
| | | 1882,5 | -4.48 | 3.31 | 27.61 | 19.82 | 95.940 | Vertical | 2 | Pass |
| | | 1907.5 | -4.98 | 3.33 | 27.57 | 19.26 | 84.333 | Vertical | 2 | Pass |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 20.0MHz | 1/#Mid | 1860 | -5.02 | 3.17 | 27.66 | 19.47 | 88.512 | Vertical | 2 | Pass |
| Band 16 | | 1882,5 | -4.60 | 3.32 | 27.61 | 19.69 | 93.111 | Vertical | 2 | Pass |
| QAM | | 1905 | -4.59 | 3.36 | 27.56 | 19.61 | 91.411 | Vertical | 2 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

## 8.9 LTE BAND 26 A

| | Radiated Power (ERP) for Band 26(814-824) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | | |
| 1.4MHz BW QPSK | 6/0 | 814.7 | -1.61 | 3.76 | 28.24 | 2.15 | 20.72 | 118.03 | Horizontal | 100 | | Pass |
| | | 819 | -1.47 | 3.91 | 28.22 | 2.15 | 20.69 | 117.22 | Horizontal | 100 | | Pass |
| | | 823.3 | -1.59 | 3.93 | 28.20 | 2.15 | 20.53 | 112.98 | Horizontal | 100 | | Pass |
| 3.0MHz BW QPSK | 15/0 | 815.5 | -1.80 | 3.77 | 28.23 | 2.15 | 20.51 | 112.46 | Horizontal | 100 | | Pass |
| | | 819 | -1.70 | 3.91 | 28.24 | 2.15 | 20.48 | 111.69 | Horizontal | 100 | | Pass |
| | | 822.5 | -1.78 | 3.94 | 28.25 | 2.15 | 20.38 | 109.14 | Horizontal | 100 | | Pass |
| 5.0MHz BW QPSK | 25/0 | 816.5 | -1.59 | 3.77 | 28.31 | 2.15 | 20.80 | 120.23 | Horizontal | 100 | | Pass |
| | | 819 | -1.42 | 3.91 | 28.22 | 2.15 | 20.74 | 118.58 | Horizontal | 100 | | Pass |
| | | 821.5 | -1.52 | 3.94 | 28.20 | 2.15 | 20.59 | 114.55 | Horizontal | 100 | | Pass |
| 10.0MHz BW QPSK | 50/0 | 819 | -1.32 | 3.91 | 28.22 | 2.15 | **20.84** | 121.34 | Horizontal | 100 | | Pass |
| 1.4MHz BW QPSK | 6/0 | 814.7 | -1.57 | 3.79 | 28.34 | 2.15 | 20.83 | 121.06 | Vertical | 100 | | Pass |
| | | 819 | -1.39 | 3.95 | 28.22 | 2.15 | 20.73 | 118.30 | Vertical | 100 | | Pass |
| | | 823.3 | -2.14 | 3.97 | 28.18 | 2.15 | 19.92 | 98.17 | Vertical | 100 | | Pass |
| 3.0MHz BW QPSK | 15/0 | 815.5 | -3.14 | 3.77 | 28.23 | 2.15 | 19.17 | 82.60 | Vertical | 100 | | Pass |
| | | 819 | -2.78 | 3.91 | 28.24 | 2.15 | 19.40 | 87.10 | Vertical | 100 | | Pass |
| | | 822.5 | -2.78 | 3.94 | 28.25 | 2.15 | 19.38 | 86.70 | Vertical | 100 | | Pass |
| 5.0MHz BW QPSK | 25/0 | 816.5 | -2.40 | 3.77 | 28.31 | 2.15 | 19.99 | 99.77 | Vertical | 100 | | Pass |
| | | 819 | -2.56 | 3.91 | 28.22 | 2.15 | 19.60 | 91.20 | Vertical | 100 | | Pass |
| | | 821.5 | -2.41 | 3.94 | 28.20 | 2.15 | 19.70 | 93.33 | Vertical | 100 | | Pass |
| 10.0MHz BW QPSK | 50/0 | 819 | -2.77 | 3.91 | 28.22 | 2.15 | 19.39 | 86.90 | Vertical | 100 | | Pass |

| | Radiated Power (ERP) for Band 26(814-824) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | |
| 1.4MHz BW 16 QAM | 6/0 | 814.7 | -1.48 | 3.76 | 28.24 | 2.15 | 20.85 | 121.62 | Horizontal | 100 | Pass |
| | | 819 | -1.34 | 3.91 | 28.22 | 2.15 | 20.82 | 120.78 | Horizontal | 100 | Pass |
| | | 823.3 | -1.46 | 3.93 | 28.20 | 2.15 | 20.66 | 116.41 | Horizontal | 100 | Pass |
| 3.0MHz BW 16 QAM | 15/0 | 815.5 | -1.67 | 3.77 | 28.23 | 2.15 | 20.64 | 115.88 | Horizontal | 100 | Pass |
| | | 819 | -1.57 | 3.91 | 28.24 | 2.15 | 20.61 | 115.08 | Horizontal | 100 | Pass |
| | | 822.5 | -1.65 | 3.94 | 28.25 | 2.15 | 20.51 | 112.46 | Horizontal | 100 | Pass |
| 5.0MHz BW 16 QAM | 25/0 | 816.5 | -1.46 | 3.77 | 28.31 | 2.15 | 20.93 | 123.88 | Horizontal | 100 | Pass |
| | | 819 | -1.29 | 3.91 | 28.22 | 2.15 | 20.87 | 122.18 | Horizontal | 100 | Pass |
| | | 821.5 | -1.39 | 3.94 | 28.20 | 2.15 | 20.72 | 118.03 | Horizontal | 100 | Pass |
| 10.0MHz BW 16 QAM | 50/0 | 819 | -1.21 | 3.91 | 28.24 | 2.15 | **20.97** | 125.03 | Horizontal | 100 | Pass |
| 1.4MHz BW 16 QAM | 6/0 | 814.7 | -1.44 | 3.79 | 28.34 | 2.15 | 20.96 | 124.74 | Vertical | 100 | Pass |
| | | 819 | -1.26 | 3.95 | 28.22 | 2.15 | 20.86 | 121.90 | Vertical | 100 | Pass |
| | | 823.3 | -2.84 | 3.97 | 28.18 | 2.15 | 19.22 | 83.56 | Vertical | 100 | Pass |
| 3.0MHz BW 16 QAM | 15/0 | 815.5 | -2.95 | 3.77 | 28.23 | 2.15 | 19.36 | 86.30 | Vertical | 100 | Pass |
| | | 819 | -2.20 | 3.91 | 28.24 | 2.15 | 19.98 | 99.54 | Vertical | 100 | Pass |
| | | 822.5 | -2.22 | 3.94 | 28.25 | 2.15 | 19.94 | 98.63 | Vertical | 100 | Pass |
| 5.0MHz BW 16 QAM | 25/0 | 816.5 | -2.43 | 3.77 | 28.31 | 2.15 | 19.96 | 99.08 | Vertical | 100 | Pass |
| | | 819 | -2.31 | 3.91 | 28.22 | 2.15 | 19.85 | 96.61 | Vertical | 100 | Pass |
| | | 821.5 | -2.82 | 3.94 | 28.20 | 2.15 | 19.29 | 84.92 | Vertical | 100 | Pass |
| 10.0MHz BW 16 QAM | 50/0 | 819 | -2.23 | 3.91 | 28.24 | 2.15 | 19.95 | 98.86 | Vertical | 100 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

## 8.10 LTE BAND 26 B

| | Radiated Power (ERP) for Band 26(824-849) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | |
| 1.4MHz Band QPSK | 6/0 | 824.7 | 4.29 | 2.01 | 19.68 | 2.15 | 19.81 | 95.72 | Horizontal | 7 | Pass |
| | | 836.5 | 4.23 | 2.01 | 19.77 | 2.15 | 19.84 | 96.38 | Horizontal | 7 | Pass |
| | | 848.3 | 4.17 | 2.02 | 19.82 | 2.15 | 19.82 | 95.94 | Horizontal | 7 | Pass |
| 3.0MHz Band QPSK | 15/0 | 825.5 | 4.33 | 2.01 | 19.70 | 2.15 | 19.87 | 97.05 | Horizontal | 7 | Pass |
| | | 836.5 | 3.96 | 2.01 | 19.77 | 2.15 | 19.57 | 90.57 | Horizontal | 7 | Pass |
| | | 847.5 | 4.41 | 2.02 | 19.81 | 2.15 | 20.05 | 101.16 | Horizontal | 7 | Pass |
| 5.0MHz Band QPSK | 25/0 | 826.5 | 4.59 | 2.01 | 19.71 | 2.15 | 20.14 | 103.28 | Horizontal | 7 | Pass |
| | | 836.5 | 4.41 | 2.01 | 19.77 | 2.15 | 20.02 | 100.46 | Horizontal | 7 | Pass |
| | | 846.5 | 3.78 | 2.02 | 19.79 | 2.15 | 19.40 | 87.10 | Horizontal | 7 | Pass |
| 10.0MHz Band QPSK | 50/0 | 829 | 3.80 | 2.01 | 19.73 | 2.15 | 19.37 | 86.50 | Horizontal | 7 | Pass |
| | | 836.5 | 3.92 | 2.01 | 19.77 | 2.15 | 19.53 | 89.74 | Horizontal | 7 | Pass |
| | | 844 | 4.52 | 2.02 | 19.78 | 2.15 | 20.13 | 103.04 | Horizontal | 7 | Pass |
| 15.0MHz Band QPSK | 75/0 | 831.5 | 3.61 | 2.01 | 19.73 | 2.15 | 19.18 | 82.79 | Horizontal | 7 | Pass |
| | | 836.5 | 4.54 | 2.01 | 19.77 | 2.15 | **20.15** | 103.51 | Horizontal | 7 | Pass |
| | | 841.5 | 4.27 | 2.02 | 19.78 | 2.15 | 19.88 | 97.27 | Horizontal | 7 | Pass |
| 1.4MHz Band QPSK | 6/0 | 824.7 | 3.87 | 2.01 | 19.68 | 2.15 | 19.39 | 86.90 | Vertical | 7 | Pass |
| | | 836.5 | 3.81 | 2.01 | 19.77 | 2.15 | 19.42 | 87.50 | Vertical | 7 | Pass |
| | | 848.3 | 4.07 | 2.02 | 19.82 | 2.15 | 19.72 | 93.76 | Vertical | 7 | Pass |
| 3.0MHz Band QPSK | 15/0 | 825.5 | 4.01 | 2.01 | 19.70 | 2.15 | 19.55 | 90.16 | Vertical | 7 | Pass |
| | | 836.5 | 3.63 | 2.01 | 19.77 | 2.15 | 19.24 | 83.95 | Vertical | 7 | Pass |
| | | 847.5 | 3.88 | 2.02 | 19.81 | 2.15 | 19.52 | 89.54 | Vertical | 7 | Pass |
| 5.0MHz Band QPSK | 25/0 | 826.5 | 4.03 | 2.01 | 19.71 | 2.15 | 19.58 | 90.78 | Vertical | 7 | Pass |
| | | 836.5 | 3.78 | 2.01 | 19.77 | 2.15 | 19.39 | 86.90 | Vertical | 7 | Pass |
| | | 846.5 | 3.90 | 2.02 | 19.79 | 2.15 | 19.52 | 89.54 | Vertical | 7 | Pass |
| 10.0MHz Band QPSK | 50/0 | 829 | 3.67 | 2.01 | 19.73 | 2.15 | 19.24 | 83.95 | Vertical | 7 | Pass |
| | | 836.5 | 4.01 | 2.01 | 19.77 | 2.15 | 19.62 | 91.62 | Vertical | 7 | Pass |
| | | 844 | 3.85 | 2.02 | 19.78 | 2.15 | 19.46 | 88.31 | Vertical | 7 | Pass |
| 15.0MHz Band QPSK | 75/0 | 831.5 | 3.68 | 2.01 | 19.73 | 2.15 | 19.25 | 84.14 | Vertical | 7 | Pass |
| | | 836.5 | 4.43 | 2.01 | 19.77 | 2.15 | 20.04 | 100.93 | Vertical | 7 | Pass |
| | | 841.5 | 4.03 | 2.02 | 19.78 | 2.15 | 19.64 | 92.04 | Vertical | 7 | Pass |

| | Radiated Power (ERP) for Band 26(824-849) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Correction (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | | |
| 1.4MHz Band 16 QAM | 6/0 | 824.7 | 4.38 | 2.01 | 19.68 | 2.15 | 19.90 | 97.72 | Horizontal | 7 | Pass |
| | | 836.5 | 3.61 | 2.01 | 19.77 | 2.15 | 19.22 | 83.56 | Horizontal | 7 | Pass |
| | | 848.3 | 3.55 | 2.02 | 19.82 | 2.15 | 19.20 | 83.18 | Horizontal | 7 | Pass |
| 3.0MHz Band 16 QAM | 15/0 | 825.5 | 3.64 | 2.01 | 19.70 | 2.15 | 19.18 | 82.79 | Horizontal | 7 | Pass |
| | | 836.5 | 3.94 | 2.01 | 19.77 | 2.15 | 19.55 | 90.16 | Horizontal | 7 | Pass |
| | | 847.5 | 3.64 | 2.02 | 19.81 | 2.15 | 19.28 | 84.72 | Horizontal | 7 | Pass |
| 5.0MHz Band 16 QAM | 25/0 | 826.5 | 3.80 | 2.01 | 19.71 | 2.15 | 19.35 | 86.10 | Horizontal | 7 | Pass |
| | | 836.5 | 3.77 | 2.01 | 19.77 | 2.15 | 19.38 | 86.70 | Horizontal | 7 | Pass |
| | | 846.5 | 3.61 | 2.02 | 19.79 | 2.15 | 19.23 | 83.75 | Horizontal | 7 | Pass |
| 10.0MHz Band 16 QAM | 50/0 | 829 | 4.01 | 2.01 | 19.73 | 2.15 | 19.58 | 90.78 | Horizontal | 7 | Pass |
| | | 836.5 | 4.33 | 2.01 | 19.77 | 2.15 | 19.94 | 98.63 | Horizontal | 7 | Pass |
| | | 844 | 3.57 | 2.02 | 19.78 | 2.15 | 19.18 | 82.79 | Horizontal | 7 | Pass |
| 15.0MHz Band QPSK | 75/0 | 831.5 | 4.39 | 2.01 | 19.73 | 2.15 | **19.96** | 99.08 | Horizontal | 7 | Pass |
| | | 836.5 | 3.57 | 2.01 | 19.77 | 2.15 | 19.18 | 82.79 | Horizontal | 7 | Pass |
| | | 841.5 | 3.37 | 2.02 | 19.78 | 2.15 | 18.98 | 79.07 | Horizontal | 7 | Pass |
| 1.4MHz Band 16 QAM | 6/0 | 824.7 | 3.89 | 2.01 | 19.68 | 2.15 | 19.41 | 87.30 | Vertical | 7 | Pass |
| | | 836.5 | 4.28 | 2.01 | 19.77 | 2.15 | 19.89 | 97.50 | Vertical | 7 | Pass |
| | | 848.3 | 4.03 | 2.02 | 19.82 | 2.15 | 19.68 | 92.90 | Vertical | 7 | Pass |
| 3.0MHz Band 16 QAM | 15/0 | 825.5 | 3.83 | 2.01 | 19.70 | 2.15 | 19.37 | 86.50 | Vertical | 7 | Pass |
| | | 836.5 | 3.65 | 2.01 | 19.77 | 2.15 | 19.26 | 84.33 | Vertical | 7 | Pass |
| | | 847.5 | 4.25 | 2.02 | 19.81 | 2.15 | 19.89 | 97.50 | Vertical | 7 | Pass |
| 5.0MHz Band 16 QAM | 25/0 | 826.5 | 3.52 | 2.01 | 19.71 | 2.15 | 19.07 | 80.72 | Vertical | 7 | Pass |
| | | 836.5 | 3.96 | 2.01 | 19.77 | 2.15 | 19.57 | 90.57 | Vertical | 7 | Pass |
| | | 846.5 | 3.58 | 2.02 | 19.79 | 2.15 | 19.20 | 83.18 | Vertical | 7 | Pass |
| 10.0MHz Band 16 QAM | 50/0 | 829 | 3.99 | 2.01 | 19.73 | 2.15 | 19.56 | 90.36 | Vertical | 7 | Pass |
| | | 836.5 | 4.21 | 2.01 | 19.77 | 2.15 | 19.82 | 95.94 | Vertical | 7 | Pass |
| | | 844 | 3.59 | 2.02 | 19.78 | 2.15 | 19.20 | 83.18 | Vertical | 7 | Pass |
| 15.0MHz Band QPSK | 75/0 | 831.5 | 3.53 | 2.01 | 19.73 | 2.15 | 19.10 | 81.28 | Vertical | 7 | Pass |
| | | 836.5 | 3.46 | 2.01 | 19.77 | 2.15 | 19.07 | 80.72 | Vertical | 7 | Pass |
| | | 841.5 | 3.72 | 2.02 | 19.78 | 2.15 | 19.33 | 85.70 | Vertical | 7 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

## 8.11 LTE BAND 38

| Radiated Power (EIRP) for Band 38 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Gain (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | |
| 5.0MHz Band QPSK | 25/0 | 2572.5 | -2.12 | 4.95 | 27.79 | 18.97 | 78.886 | Vertical | 2 | Pass |
| | | 2595 | -2.64 | 4.88 | 27.71 | 19.63 | 91.833 | Vertical | 2 | Pass |
| | | 2617.5 | -2.58 | 4.93 | 27.95 | 19.03 | 79.983 | Vertical | 2 | Pass |
| 5.0MHz Band 16 QAM | 25/0 | 2572.5 | -2.37 | 4.81 | 27.73 | 19.05 | 80.353 | Vertical | 2 | Pass |
| | | 2595 | -2.47 | 4.95 | 27.81 | 19.12 | 81.658 | Vertical | 2 | Pass |
| | | 2617.5 | -2.59 | 5.03 | 27.69 | 18.97 | 78.886 | Vertical | 2 | Pass |
| 10.0MHz Band QPSK | 50/0 | 2575 | -2.98 | 5.01 | 27.86 | 19.36 | 86.298 | Vertical | 2 | Pass |
| | | 2595 | -2.6 | 5 | 27.65 | 19.24 | 83.946 | Vertical | 2 | Pass |
| | | 2615 | -2.67 | 4.87 | 27.89 | 19.16 | 82.414 | Vertical | 2 | Pass |
| 10.0MHz Band 16 QAM | 50/0 | 2575 | -2.71 | 4.77 | 27.78 | 19.15 | 82.224 | Vertical | 2 | Pass |
| | | 2595 | -2.38 | 4.87 | 27.87 | 19.89 | 97.499 | Vertical | 2 | Pass |
| | | 2615 | -2.56 | 4.94 | 27.77 | 19.06 | 80.538 | Vertical | 2 | Pass |
| 15.0MHz Band QPSK | 75/0 | 2577.5 | -2.9 | 4.89 | 27.88 | 19.25 | 84.140 | Vertical | 2 | Pass |
| | | 2595 | -2.32 | 4.87 | 27.84 | 19.00 | 79.433 | Vertical | 2 | Pass |
| | | 2612.5 | -2.52 | 4.92 | 27.93 | 19.80 | 95.499 | Vertical | 2 | Pass |
| 15.0MHz Band 16 QAM | 75/0 | 2577.5 | -2.53 | 4.75 | 27.78 | 18.98 | 79.068 | Vertical | 2 | Pass |
| | | 2595 | -2.53 | 4.98 | 27.82 | 19.48 | 88.716 | Vertical | 2 | Pass |
| | | 2612.5 | -2.6 | 4.95 | 27.83 | 19.73 | 93.972 | Vertical | 2 | Pass |
| 20.0MHz Band QPSK | 100/0 | 2580 | -2.53 | 4.86 | 27.8 | 19.19 | 82.985 | Vertical | 2 | Pass |
| | | 2595 | -2.37 | 4.79 | 27.83 | **20.55** | 113.501 | Vertical | 2 | Pass |
| | | 2610 | -2.68 | 4.89 | 27.87 | 19.73 | 93.972 | Vertical | 2 | Pass |
| 20.0MHz Band 16 QAM | 100/0 | 2580 | -2.87 | 4.95 | 27.73 | 19.45 | 88.105 | Vertical | 2 | Pass |
| | | 2595 | -2.88 | 4.91 | 27.71 | 19.01 | 79.616 | Vertical | 2 | Pass |
| | | 2610 | -2.81 | 4.96 | 27.92 | 19.43 | 87.700 | Vertical | 2 | Pass |

| | Radiated Power (EIRP) for Band 38 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Gain (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 5.0MHz Band QPSK | 25/0 | 2572.5 | -2.12 | 4.95 | 27.79 | 19.14 | 82.035 | Horizontal | 2 | Pass |
| | | 2595 | -2.64 | 4.88 | 27.71 | 19.27 | 84.528 | Horizontal | 2 | Pass |
| | | 2617.5 | -2.58 | 4.93 | 27.95 | 18.73 | 74.645 | Horizontal | 2 | Pass |
| 5.0MHz Band 16 QAM | 25/0 | 2572.5 | -2.37 | 4.81 | 27.73 | 19.51 | 89.331 | Horizontal | 2 | Pass |
| | | 2595 | -2.47 | 4.95 | 27.81 | 19.04 | 80.168 | Horizontal | 2 | Pass |
| | | 2617.5 | -2.59 | 5.03 | 27.69 | 19.63 | 91.833 | Horizontal | 2 | Pass |
| 10.0MHz Band QPSK | 50/0 | 2575 | -2.98 | 5.01 | 27.86 | 19.10 | 81.283 | Horizontal | 2 | Pass |
| | | 2595 | -2.6 | 5 | 27.65 | 18.81 | 76.033 | Horizontal | 2 | Pass |
| | | 2615 | -2.67 | 4.87 | 27.89 | 18.89 | 77.446 | Horizontal | 2 | Pass |
| 10.0MHz Band 16 QAM | 50/0 | 2575 | -2.71 | 4.77 | 27.78 | 19.28 | 84.723 | Horizontal | 2 | Pass |
| | | 2595 | -2.38 | 4.87 | 27.87 | 19.58 | 90.782 | Horizontal | 2 | Pass |
| | | 2615 | -2.56 | 4.94 | 27.77 | 18.70 | 74.131 | Horizontal | 2 | Pass |
| 15.0MHz Band QPSK | 75/0 | 2577.5 | -2.9 | 4.89 | 27.88 | 19.42 | 87.498 | Horizontal | 2 | Pass |
| | | 2595 | -2.32 | 4.87 | 27.84 | 18.86 | 76.913 | Horizontal | 2 | Pass |
| | | 2612.5 | -2.52 | 4.92 | 27.93 | 18.76 | 75.162 | Horizontal | 2 | Pass |
| 15.0MHz Band 16 QAM | 75/0 | 2577.5 | -2.53 | 4.75 | 27.78 | 19.11 | 81.470 | Horizontal | 2 | Pass |
| | | 2595 | -2.53 | 4.98 | 27.82 | 18.82 | 76.208 | Horizontal | 2 | Pass |
| | | 2612.5 | -2.6 | 4.95 | 27.83 | 18.77 | 75.336 | Horizontal | 2 | Pass |
| 20.0MHz Band QPSK | 100/0 | 2580 | -2.53 | 4.86 | 27.8 | 18.80 | 75.858 | Horizontal | 2 | Pass |
| | | 2595 | -2.37 | 4.79 | 27.83 | 20.29 | 106.905 | Horizontal | 2 | Pass |
| | | 2610 | -2.68 | 4.89 | 27.87 | 18.73 | 74.645 | Horizontal | 2 | Pass |
| 20.0MHz Band 16 QAM | 100/0 | 2580 | -2.87 | 4.95 | 27.73 | 19.49 | 88.920 | Horizontal | 2 | Pass |
| | | 2595 | -2.88 | 4.91 | 27.71 | 18.96 | 78.705 | Horizontal | 2 | Pass |
| | | 2610 | -2.81 | 4.96 | 27.92 | **20.44** | 110.662 | Horizontal | 2 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

## 8.12 LTE BAND 41

| | Radiated Power (EIRP) for Band 41 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 5.0MHz Band QPSK | 1/#Mid | 2537.5 | -2.90 | 4.54 | 27.75 | 20.31 | 107.399 | Horizontal | 2 | Pass |
| | | 2595 | -2.75 | 4.69 | 27.72 | 20.28 | 106.660 | Horizontal | 2 | Pass |
| | | 2652.5 | -2.63 | 4.71 | 27.71 | 20.37 | 108.893 | Horizontal | 2 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 2540 | -2.98 | 4.55 | 27.76 | 20.23 | 105.439 | Horizontal | 2 | Pass |
| | | 2595 | -2.84 | 4.69 | 27.72 | 20.19 | 104.472 | Horizontal | 2 | Pass |
| | | 2650 | -2.83 | 4.72 | 27.70 | 20.15 | 103.514 | Horizontal | 2 | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 2542.5 | -2.81 | 4.55 | 27.77 | 20.41 | 109.901 | Horizontal | 2 | Pass |
| | | 2595 | -2.53 | 4.69 | 27.72 | 20.50 | 112.202 | Horizontal | 2 | Pass |
| | | 2647.5 | -2.58 | 4.72 | 27.69 | 20.39 | 109.396 | Horizontal | 2 | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 2545 | -2.42 | 4.57 | 27.78 | **20.79** | 119.950 | Horizontal | 2 | Pass |
| | | 2595 | -2.47 | 4.73 | 27.72 | 20.52 | 112.720 | Horizontal | 2 | Pass |
| | | 2645 | -2.47 | 4.75 | 27.68 | 20.46 | 111.173 | Horizontal | 2 | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 2537.5 | -2.70 | 4.54 | 27.75 | 20.51 | 112.460 | Vertical | 2 | Pass |
| | | 2595 | -2.61 | 4.69 | 27.72 | 20.42 | 110.154 | Vertical | 2 | Pass |
| | | 2652.5 | -2.59 | 4.71 | 27.71 | 20.41 | 109.901 | Vertical | 2 | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 2540 | -2.68 | 4.55 | 27.76 | 20.53 | 112.980 | Vertical | 2 | Pass |
| | | 2595 | -2.52 | 4.69 | 27.72 | 20.51 | 112.460 | Vertical | 2 | Pass |
| | | 2650 | -2.59 | 4.72 | 27.70 | 20.39 | 109.396 | Vertical | 2 | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 2542.5 | -4.42 | 4.55 | 27.77 | 18.80 | 75.858 | Vertical | 2 | Pass |
| | | 2595 | -3.32 | 4.69 | 27.72 | 19.71 | 93.541 | Vertical | 2 | Pass |
| | | 2647.5 | -3.54 | 4.72 | 27.69 | 19.43 | 87.700 | Vertical | 2 | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 2545 | -3.83 | 4.57 | 27.78 | 19.38 | 86.696 | Vertical | 2 | Pass |
| | | 2595 | -3.55 | 4.73 | 27.72 | 19.44 | 87.902 | Vertical | 2 | Pass |
| | | 2645 | -3.30 | 4.75 | 27.68 | 19.63 | 91.833 | Vertical | 2 | Pass |

| | Radiated Power (EIRP) for Band 41 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | Polarization Of Max. ERP | Limit (W) | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | | | |
| 5.0MHz Band 16 QAM | 1/#Mid | 2537.5 | -2.77 | 4.54 | 27.75 | 20.44 | 110.662 | Horizontal | 2 | Pass |
| | | 2595 | -2.62 | 4.69 | 27.72 | 20.41 | 109.901 | Horizontal | 2 | Pass |
| | | 2652.5 | -2.50 | 4.71 | 27.71 | 20.50 | 112.202 | Horizontal | 2 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 2540 | -2.85 | 4.55 | 27.76 | 20.36 | 108.643 | Horizontal | 2 | Pass |
| | | 2595 | -2.71 | 4.69 | 27.72 | 20.32 | 107.647 | Horizontal | 2 | Pass |
| | | 2650 | -2.70 | 4.72 | 27.70 | 20.28 | 106.660 | Horizontal | 2 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 2542.5 | -2.68 | 4.55 | 27.77 | 20.54 | 113.240 | Horizontal | 2 | Pass |
| | | 2595 | -2.40 | 4.69 | 27.72 | 20.63 | 115.611 | Horizontal | 2 | Pass |
| | | 2647.5 | -2.45 | 4.72 | 27.69 | 20.52 | 112.720 | Horizontal | 2 | Pass |
| 20.0MHz Band 16 QAM | 1/#Mid | 2545 | -2.40 | 4.57 | 27.78 | **20.81** | 120.504 | Horizontal | 2 | Pass |
| | | 2595 | -2.34 | 4.73 | 27.72 | 20.65 | 116.145 | Horizontal | 2 | Pass |
| | | 2645 | -2.34 | 4.75 | 27.68 | 20.59 | 114.551 | Horizontal | 2 | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 2537.5 | -2.57 | 4.54 | 27.75 | 20.64 | 115.878 | Vertical | 2 | Pass |
| | | 2595 | -2.48 | 4.69 | 27.72 | 20.55 | 113.501 | Vertical | 2 | Pass |
| | | 2652.5 | -2.46 | 4.71 | 27.71 | 20.54 | 113.240 | Vertical | 2 | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 2540 | -2.55 | 4.55 | 27.76 | 20.66 | 116.413 | Vertical | 2 | Pass |
| | | 2595 | -2.39 | 4.69 | 27.72 | 20.64 | 115.878 | Vertical | 2 | Pass |
| | | 2650 | -2.46 | 4.72 | 27.70 | 20.52 | 112.720 | Vertical | 2 | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 2542.5 | -3.69 | 4.55 | 27.77 | 19.53 | 89.743 | Vertical | 2 | Pass |
| | | 2595 | -3.30 | 4.69 | 27.72 | 19.73 | 93.972 | Vertical | 2 | Pass |
| | | 2647.5 | -4.02 | 4.72 | 27.69 | 18.95 | 78.524 | Vertical | 2 | Pass |
| 20.0MHz Band 16 QAM | 1/#Mid | 2545 | -3.90 | 4.57 | 27.78 | 19.31 | 85.310 | Vertical | 2 | Pass |
| | | 2595 | -3.60 | 4.73 | 27.72 | 19.39 | 86.896 | Vertical | 2 | Pass |
| | | 2645 | -3.13 | 4.75 | 27.68 | 19.80 | 95.499 | Vertical | 2 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

## 8.13 LTE BAND 66

| | Radiated Power (EIRP) for Band 66 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | | |
| 1.4MHz Band QPSK | 1/#Mid | 1710.7 | -4.04 | 3.76 | 28.24 | 20.44 | 110.662 | Horizontal | 1 | | Pass |
| | | 1745 | -3.90 | 3.91 | 28.22 | 20.41 | 109.901 | Horizontal | 1 | | Pass |
| | | 1779.3 | -3.77 | 3.93 | 28.2 | 20.50 | 112.202 | Horizontal | 1 | | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 1711.5 | -4.10 | 3.77 | 28.23 | 20.36 | 108.643 | Horizontal | 1 | | Pass |
| | | 1745 | -4.01 | 3.91 | 28.24 | 20.32 | 107.647 | Horizontal | 1 | | Pass |
| | | 1778.5 | -4.03 | 3.94 | 28.25 | 20.28 | 106.660 | Horizontal | 1 | | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 1712.5 | -4.00 | 3.77 | 28.31 | 20.54 | 113.240 | Horizontal | 1 | | Pass |
| | | 1745 | -3.68 | 3.91 | 28.22 | 20.63 | 115.611 | Horizontal | 1 | | Pass |
| | | 1777.5 | -3.74 | 3.94 | 28.2 | 20.52 | 112.720 | Horizontal | 1 | | Pass |
| 10.0MHz Band QPSK | 1/#Mid | 1715 | -3.89 | 3.79 | 28.33 | 20.65 | 116.145 | Horizontal | 1 | | Pass |
| | | 1745 | -3.62 | 3.95 | 28.22 | 20.65 | 116.145 | Horizontal | 1 | | Pass |
| | | 1775 | -3.63 | 3.97 | 28.19 | 20.59 | 114.551 | Horizontal | 1 | | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 1717.5 | -3.91 | 3.79 | 28.34 | 20.64 | 115.878 | Horizontal | 1 | | Pass |
| | | 1745 | -3.72 | 3.95 | 28.22 | 20.55 | 113.501 | Horizontal | 1 | | Pass |
| | | 1772.5 | -3.67 | 3.97 | 28.18 | 20.54 | 113.240 | Horizontal | 1 | | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 1720 | -3.88 | 3.81 | 28.35 | **20.66** | 116.413 | Horizontal | 1 | | Pass |
| | | 1745 | -3.62 | 3.96 | 28.22 | 20.64 | 115.878 | Horizontal | 1 | | Pass |
| | | 1770 | -3.64 | 4 | 28.16 | 20.52 | 112.720 | Horizontal | 1 | | Pass |
| 1.4MHz Band QPSK | 1/#Mid | 1710.7 | -5.30 | 3.76 | 28.24 | 19.18 | 82.794 | Vertical | 1 | | Pass |
| | | 1745 | -5.05 | 3.91 | 28.22 | 19.26 | 84.333 | Vertical | 1 | | Pass |
| | | 1779.3 | -5.01 | 3.93 | 28.2 | 19.26 | 84.333 | Vertical | 1 | | Pass |
| 3.0MHz Band QPSK | 1/#Mid | 1711.5 | -5.11 | 3.77 | 28.23 | 19.35 | 86.099 | Vertical | 1 | | Pass |
| | | 1745 | -4.41 | 3.91 | 28.24 | 19.92 | 98.175 | Vertical | 1 | | Pass |
| | | 1778.5 | -4.78 | 3.94 | 28.25 | 19.53 | 89.743 | Vertical | 1 | | Pass |
| 5.0MHz Band QPSK | 1/#Mid | 1712.5 | -5.22 | 3.77 | 28.31 | 19.32 | 85.507 | Vertical | 1 | | Pass |
| | | 1745 | -4.63 | 3.91 | 28.22 | 19.68 | 92.897 | Vertical | 1 | | Pass |
| | | 1777.5 | -4.69 | 3.94 | 28.2 | 19.57 | 90.573 | Vertical | 1 | | Pass |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 10.0MHz Band QPSK | 1/#Mid | 1715 | -5.04 | 3.79 | 28.34 | 19.51 | 89.331 | Vertical | 1 | Pass |
| | | 1745 | -4.64 | 3.95 | 28.22 | 19.63 | 91.833 | Vertical | 1 | Pass |
| | | 1775 | -4.33 | 3.97 | 28.18 | 19.88 | 97.275 | Vertical | 1 | Pass |
| 15.0MHz Band QPSK | 1/#Mid | 1717.5 | -4.80 | 3.81 | 28.35 | 19.74 | 94.189 | Vertical | 1 | Pass |
| | | 1745 | -5.27 | 3.96 | 28.22 | 18.99 | 79.250 | Vertical | 1 | Pass |
| | | 1772.5 | -5.00 | 4 | 28.16 | 19.16 | 82.414 | Vertical | 1 | Pass |
| 20.0MHz Band QPSK | 1/#Mid | 1720 | -5.29 | 3.79 | 28.34 | 19.26 | 84.333 | Vertical | 1 | Pass |
| | | 1745 | -4.50 | 3.95 | 28.22 | 19.77 | 94.842 | Vertical | 1 | Pass |
| | | 1770 | -5.24 | 3.97 | 28.18 | 18.97 | 78.886 | Vertical | 1 | Pass |

| | Radiated Power (EIRP) for Band 66 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mode | RB/RB SIZE | Frequency | Result | | | | | | | | Conclusion |
| | | | SG Level (dBm) | Cable Loss (dBm) | Antenna Factor (dB) | Max. EIRP Average (dBm) | Max. EIRP Average (mW) | Polarization Of Max. ERP | Limit (W) | | |
| 1.4MHz Band 16 QAM | 1/#Mid | 1710.7 | -4.97 | 3.76 | 28.24 | 19.51 | 89.331 | Horizontal | 1 | | Pass |
| | | 1745 | -4.58 | 3.91 | 28.22 | 19.73 | 93.972 | Horizontal | 1 | | Pass |
| | | 1779.3 | -4.76 | 3.93 | 28.2 | 19.51 | 89.331 | Horizontal | 1 | | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 1711.5 | -5.36 | 3.77 | 28.23 | 19.10 | 81.283 | Horizontal | 1 | | Pass |
| | | 1745 | -4.61 | 3.91 | 28.24 | 19.72 | 93.756 | Horizontal | 1 | | Pass |
| | | 1778.5 | -4.90 | 3.94 | 28.25 | 19.41 | 87.297 | Horizontal | 1 | | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 1712.5 | -4.78 | 3.77 | 28.31 | 19.76 | 94.624 | Horizontal | 1 | | Pass |
| | | 1745 | -4.84 | 3.91 | 28.22 | 19.47 | 88.512 | Horizontal | 1 | | Pass |
| | | 1777.5 | -4.51 | 3.94 | 28.2 | 19.75 | 94.406 | Horizontal | 1 | | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 1715 | -4.83 | 3.79 | 28.33 | 19.71 | 93.541 | Horizontal | 1 | | Pass |
| | | 1745 | -4.49 | 3.95 | 28.22 | 19.78 | 95.060 | Horizontal | 1 | | Pass |
| | | 1775 | -4.81 | 3.97 | 28.19 | 19.41 | 87.297 | Horizontal | 1 | | Pass |
| 15.0MHz Band 16 QAM | 1/#Mid | 1717.5 | -4.82 | 3.79 | 28.34 | 19.73 | 93.972 | Horizontal | 1 | | Pass |
| | | 1745 | -4.64 | 3.95 | 28.22 | 19.63 | 91.833 | Horizontal | 1 | | Pass |
| | | 1772.5 | -4.43 | 3.97 | 28.18 | 19.78 | 95.060 | Horizontal | 1 | | Pass |
| 20.0MHz Band 16 QAM | 1/#Mid | 1720 | -4.65 | 3.81 | 28.35 | **19.89** | 97.499 | Horizontal | 1 | | Pass |
| | | 1745 | -4.43 | 3.96 | 28.22 | 19.83 | 96.161 | Horizontal | 1 | | Pass |
| | | 1770 | -4.37 | 4 | 28.16 | 19.79 | 95.280 | Horizontal | 1 | | Pass |
| 1.4MHz Band 16 QAM | 1/#Mid | 1710.7 | -5.05 | 3.76 | 28.24 | 19.43 | 87.700 | Vertical | 1 | | Pass |
| | | 1745 | -6.40 | 3.91 | 28.22 | 17.91 | 61.802 | Vertical | 1 | | Pass |
| | | 1779.3 | -4.80 | 3.93 | 28.2 | 19.47 | 88.512 | Vertical | 1 | | Pass |
| 3.0MHz Band 16 QAM | 1/#Mid | 1711.5 | -6.44 | 3.77 | 28.23 | 18.02 | 63.387 | Vertical | 1 | | Pass |
| | | 1745 | -4.89 | 3.91 | 28.24 | 19.44 | 87.902 | Vertical | 1 | | Pass |
| | | 1778.5 | -6.49 | 3.94 | 28.25 | 17.82 | 60.534 | Vertical | 1 | | Pass |
| 5.0MHz Band 16 QAM | 1/#Mid | 1712.5 | -6.18 | 3.77 | 28.31 | 18.36 | 68.549 | Vertical | 1 | | Pass |
| | | 1745 | -6.36 | 3.91 | 28.22 | 17.95 | 62.373 | Vertical | 1 | | Pass |
| | | 1777.5 | -6.05 | 3.94 | 28.2 | 18.21 | 66.222 | Vertical | 1 | | Pass |
| 10.0MHz Band 16 QAM | 1/#Mid | 1715 | -4.84 | 3.79 | 28.34 | 19.71 | 93.541 | Vertical | 1 | | Pass |
| | | 1745 | -5.30 | 3.95 | 28.22 | 18.97 | 78.886 | Vertical | 1 | | Pass |
| | | 1775 | -6.35 | 3.97 | 28.18 | 17.86 | 61.094 | Vertical | 1 | | Pass |
| 15.0MHz | 1/#Mid | 1717.5 | -6.69 | 3.81 | 28.35 | 17.85 | 60.954 | Vertical | 1 | | Pass |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Band 16 | | 1745 | -4.68 | 3.96 | 28.22 | 19.58 | 90.782 | Vertical | 1 | Pass |
| QAM | | 1772.5 | -4.97 | 4 | 28.16 | 19.19 | 82.985 | Vertical | 1 | Pass |
| 20.0MHz | | 1720 | -6.38 | 3.79 | 28.34 | 18.17 | 65.615 | Vertical | 1 | Pass |
| Band 16 | 1/#Mid | 1745 | -5.75 | 3.95 | 28.22 | 18.52 | 71.121 | Vertical | 1 | Pass |
| QAM | | 1770 | -4.66 | 3.97 | 28.18 | 19.55 | 90.157 | Vertical | 1 | Pass |

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

# 9. SPURIOUS RADIATION EMISSION

**RULE PART(S)**

FCC: §2.1053, §22.917, §24.238, §27.53 and §90.691

**LIMIT**

§22.917 (e) and §24.238 and §90.691 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

§27.53 (g) For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB.

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(P) dB.

**TEST PROCEDURE**

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth ( i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

The unwanted emission power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth in the 1 MHz band immediately outside and adjacent to the channel edge of the equipment. Beyond the 1 MHz band immediately outside the channel edge of the equipment, a resolution bandwidth of 1 MHz shall be employed. A narrower resolution bandwidth is allowed to be used provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz or 1% of the occupied bandwidth as applicable.

The power of any unwanted emissions measured from the channel edge of the equipment shall be attenuated below the transmitter power, P (dBW), as follows:
a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB; and
b. for mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB at the channel edges and 55 + 10 Log10 (p) at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts.

**MODES TESTED**

LTE Band 2/4/5/7/12/17/25/26/38/41/66

**RESULTS**

PASS

### 9.1 LTE BAND 2

**QPSK EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)**

| Test Results for Low Channel 1850.7MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 3701.4 | -46.65 | 4.04 | 33.51 | -17.18 | -13 | -4.18 | Horizontal |
| 3701.4 | -51.64 | 4.04 | 33.51 | -22.17 | -13 | -9.17 | Vertical |
| 5552.1 | -51.78 | 5.24 | 35.84 | -21.18 | -13 | -8.18 | Vertical |
| 5552.1 | -50.57 | 5.24 | 35.84 | -19.97 | -13 | -6.97 | Horizontal |
| 206.1 | -36.38 | 1.43 | 16.02 | -21.79 | -13 | -8.79 | Vertical |
| 262.2 | -34.23 | 1.30 | 17.99 | -17.54 | -13 | -4.54 | Horizontal |
| **Test Results for Mid Channel 1880MHz** | | | | | | | |
| 3760.0 | -45.92 | 4.04 | 33.56 | -16.40 | -13 | -3.40 | Horizontal |
| 3760.0 | -44.06 | 4.04 | 33.56 | -14.54 | -13 | -1.54 | Vertical |
| 5640.0 | -48.81 | 5.24 | 35.91 | -18.14 | -13 | -5.14 | Vertical |
| 5640.0 | -50.23 | 5.24 | 35.91 | -19.56 | -13 | -6.56 | Horizontal |
| 176.2 | -39.29 | 1.62 | 16.97 | -23.94 | -13 | -10.94 | Vertical |
| 248.1 | -41.46 | 1.74 | 15.98 | -27.23 | -13 | -14.23 | Horizontal |
| **Test Results for High Channel 1909.3MHz** | | | | | | | |
| 3818.6 | -53.62 | 4.04 | 34.00 | -23.66 | -13 | -10.66 | Horizontal |
| 3818.6 | -53.90 | 4.04 | 34.00 | -23.94 | -13 | -10.94 | Vertical |
| 5727.9 | -53.09 | 5.24 | 36.04 | -22.29 | -13 | -9.29 | Vertical |
| 5727.9 | -52.63 | 5.24 | 36.04 | -21.83 | -13 | -8.83 | Horizontal |
| 183.9 | -39.96 | 1.42 | 17.29 | -24.09 | -13 | -11.09 | Vertical |
| 466.9 | -41.51 | 1.50 | 17.90 | -25.10 | -13 | -12.10 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)**

| Test Results for Low Channel 1860MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 3720.0 | -45.18 | 4.07 | 33.54 | -15.71 | -13 | -2.71 | Horizontal |
| 3720.0 | -53.79 | 4.07 | 33.54 | -24.32 | -13 | -11.32 | Vertical |
| 5580.0 | -44.74 | 5.28 | 35.86 | -14.16 | -13 | -1.16 | Vertical |
| 5580.0 | -51.95 | 5.28 | 35.86 | -21.37 | -13 | -8.37 | Horizontal |
| 192.2 | -39.82 | 1.58 | 16.89 | -24.50 | -13 | -11.50 | Vertical |
| 346.4 | -42.49 | 1.76 | 17.26 | -26.99 | -13 | -13.99 | Horizontal |
| **Test Results for Mid Channel 1880MHz** | | | | | | | |
| 3760.0 | -47.46 | 4.04 | 33.56 | -17.94 | -13 | -4.94 | Horizontal |
| 3760.0 | -52.04 | 4.04 | 33.56 | -22.52 | -13 | -9.52 | Vertical |
| 5640.0 | -45.01 | 5.24 | 35.91 | -14.34 | -13 | -1.34 | Vertical |
| 5640.0 | -51.79 | 5.24 | 35.91 | -21.12 | -13 | -8.12 | Horizontal |
| 189.9 | -43.29 | 1.46 | 16.27 | -28.48 | -13 | -15.48 | Vertical |
| 381.4 | -44.20 | 1.59 | 15.15 | -30.64 | -13 | -17.64 | Horizontal |
| **Test Results for High Channel 1900MHz** | | | | | | | |
| 3800.0 | -44.89 | 4.04 | 34.00 | -14.93 | -13 | -1.93 | Horizontal |
| 3800.0 | -51.42 | 4.04 | 34.00 | -21.46 | -13 | -8.46 | Vertical |
| 5700.0 | -51.49 | 5.24 | 36.04 | -20.69 | -13 | -7.69 | Vertical |
| 5700.0 | -51.71 | 5.24 | 36.04 | -20.91 | -13 | -7.91 | Horizontal |
| 190.6 | -43.92 | 1.36 | 17.39 | -27.88 | -13 | -14.88 | Vertical |
| 467.0 | -40.30 | 1.66 | 15.39 | -26.57 | -13 | -13.57 | Horizontal |

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

### 9.2 LTE BAND 4

**QPSK EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)**

| Test Results for Low Channel 1710.7MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 3421.4 | -45.42 | 4.02 | 29.80 | -19.64 | -13 | -6.64 | Horizontal |
| 3421.4 | -51.19 | 4.02 | 29.80 | -25.41 | -13 | -12.41 | Vertical |
| 5132.1 | -50.70 | 5.24 | 35.84 | -20.10 | -13 | -7.10 | Vertical |
| 5132.1 | -53.16 | 5.24 | 35.84 | -22.56 | -13 | -9.56 | Horizontal |
| 205.7 | -37.62 | 1.68 | 16.04 | -23.26 | -13 | -10.26 | Vertical |
| 417.8 | -38.72 | 1.78 | 17.74 | -22.76 | -13 | -9.76 | Horizontal |
| **Test Results for Mid Channel 1732.5MHz** | | | | | | | |
| 3465.0 | -46.16 | 4.03 | 30.00 | -20.19 | -13 | -7.19 | Horizontal |
| 3465.0 | -50.91 | 4.03 | 30.00 | -24.94 | -13 | -11.94 | Vertical |
| 5197.5 | -50.30 | 5.25 | 35.86 | -19.69 | -13 | -6.69 | Vertical |
| 5197.5 | -52.30 | 5.25 | 35.86 | -21.69 | -13 | -8.69 | Horizontal |
| 191.4 | -44.42 | 1.72 | 17.69 | -28.45 | -13 | -15.45 | Vertical |
| 452.1 | -37.02 | 1.62 | 16.02 | -22.61 | -13 | -9.61 | Horizontal |
| **Test Results for High Channel 1754.3MHz** | | | | | | | |
| 3508.6 | -52.68 | 4.05 | 30.01 | -26.72 | -13 | -13.72 | Horizontal |
| 3508.6 | -50.31 | 4.05 | 30.01 | -24.35 | -13 | -11.35 | Vertical |
| 5262.9 | -44.64 | 5.26 | 35.86 | -14.04 | -13 | -1.04 | Vertical |
| 5262.9 | -51.99 | 5.26 | 35.86 | -21.39 | -13 | -8.39 | Horizontal |
| 182.1 | -35.29 | 1.80 | 16.69 | -20.40 | -13 | -7.40 | Vertical |
| 306.3 | -37.44 | 1.75 | 16.66 | -22.54 | -13 | -9.54 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)**

| Test Results for Low Channel 1720MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 3440.0 | -48.87 | 4.02 | 29.80 | -23.09 | -13 | -10.09 | Horizontal |
| 3440.0 | -47.77 | 4.02 | 29.80 | -21.99 | -13 | -8.99 | Vertical |
| 5160.0 | -52.24 | 5.24 | 35.84 | -21.64 | -13 | -8.64 | Vertical |
| 5160.0 | -49.70 | 5.24 | 35.84 | -19.10 | -13 | -6.10 | Horizontal |
| 210.6 | -34.46 | 1.57 | 17.26 | -18.77 | -13 | -5.77 | Vertical |
| 271.9 | -35.91 | 1.78 | 16.35 | -21.34 | -13 | -8.34 | Horizontal |
| **Test Results for Mid Channel 1732.5MHz** | | | | | | | |
| 3465.0 | -46.38 | 4.03 | 30.00 | -20.41 | -13 | -7.41 | Horizontal |
| 3465.0 | -45.97 | 4.03 | 30.00 | -20.00 | -13 | -7.00 | Vertical |
| 5197.5 | -44.89 | 5.25 | 35.86 | -14.28 | -13 | -1.28 | Vertical |
| 5197.5 | -51.89 | 5.25 | 35.86 | -21.28 | -13 | -8.28 | Horizontal |
| 212.6 | -43.48 | 1.44 | 17.95 | -26.97 | -13 | -13.97 | Vertical |
| 436.0 | -35.25 | 1.65 | 16.09 | -20.81 | -13 | -7.81 | Horizontal |
| **Test Results for High Channel 1745MHz** | | | | | | | |
| 3490.0 | -51.57 | 2.91 | 27.68 | -26.80 | -13 | -13.80 | Horizontal |
| 3490.0 | -47.71 | 2.91 | 27.68 | -22.94 | -13 | -9.94 | Vertical |
| 5235.0 | -48.58 | 5.26 | 35.86 | -17.98 | -13 | -4.98 | Vertical |
| 5235.0 | -52.24 | 5.26 | 35.86 | -21.64 | -13 | -8.64 | Horizontal |
| 179.5 | -43.62 | 1.61 | 16.85 | -28.38 | -13 | -15.38 | Vertical |
| 314.4 | -41.24 | 1.61 | 15.19 | -27.66 | -13 | -14.66 | Horizontal |

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

### 9.3 LTE BAND 5

**QPSK EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)**

| Test Results for Low Channel 824.7MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1649.4 | -53.42 | 2.78 | 27.50 | -28.70 | -13 | -15.70 | Horizontal |
| 1649.4 | -51.64 | 2.78 | 27.50 | -26.92 | -13 | -13.92 | Vertical |
| 2474.1 | -47.78 | 2.90 | 27.80 | -22.88 | -13 | -9.88 | Vertical |
| 2474.1 | -52.29 | 2.90 | 27.80 | -27.39 | -13 | -14.39 | Horizontal |
| 208.8 | -39.35 | 1.76 | 17.59 | -23.52 | -13 | -10.52 | Vertical |
| 344.2 | -35.30 | 1.63 | 15.87 | -21.06 | -13 | -8.06 | Horizontal |
| **Test Results For Mid Channel 836.5MHz** | | | | | | | |
| 1673.0 | -46.81 | 2.80 | 27.48 | -22.13 | -13 | -9.13 | Horizontal |
| 1673.0 | -47.33 | 2.80 | 27.48 | -22.65 | -13 | -9.65 | Vertical |
| 2509.5 | -44.73 | 2.91 | 27.70 | -19.94 | -13 | -6.94 | Vertical |
| 2509.5 | -49.29 | 2.91 | 27.70 | -24.50 | -13 | -11.50 | Horizontal |
| 187.5 | -34.02 | 1.61 | 15.68 | -19.95 | -13 | -6.95 | Vertical |
| 385.8 | -36.79 | 1.59 | 17.52 | -20.87 | -13 | -7.87 | Horizontal |
| **Test Results for High Channel 848.3MHz** | | | | | | | |
| 1696.6 | -52.73 | 2.82 | 27.43 | -28.12 | -13 | -15.12 | Horizontal |
| 1696.6 | -47.02 | 2.82 | 27.43 | -22.41 | -13 | -9.41 | Vertical |
| 2544.9 | -52.64 | 2.92 | 27.74 | -27.82 | -13 | -14.82 | Vertical |
| 2544.9 | -49.65 | 2.92 | 27.74 | -24.83 | -13 | -11.83 | Horizontal |
| 212.5 | -42.22 | 1.69 | 16.67 | -27.23 | -13 | -14.23 | Vertical |
| 462.2 | -44.99 | 1.70 | 17.18 | -29.51 | -13 | -16.51 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 5 (10MHZ BANDWIDTH)**

| Test Results for Low Channel 829MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1658.0 | -46.19 | 2.78 | 27.50 | -21.47 | -13 | -8.47 | Horizontal |
| 1658.0 | -52.96 | 2.78 | 27.50 | -28.24 | -13 | -15.24 | Vertical |
| 2487.0 | -44.58 | 2.90 | 27.80 | -19.68 | -13 | -6.68 | Vertical |
| 2487.0 | -52.33 | 2.90 | 27.80 | -27.43 | -13 | -14.43 | Horizontal |
| 190.6 | -40.62 | 1.71 | 15.57 | -26.76 | -13 | -13.76 | Vertical |
| 370.6 | -38.08 | 1.34 | 16.40 | -23.02 | -13 | -10.02 | Horizontal |
| **Test Results for Mid Channel 836.5MHz** | | | | | | | |
| 1673.0 | -53.22 | 2.80 | 27.48 | -28.54 | -13 | -15.54 | Horizontal |
| 1673.0 | -53.14 | 2.80 | 27.48 | -28.46 | -13 | -15.46 | Vertical |
| 2509.5 | -50.87 | 2.91 | 27.70 | -26.08 | -13 | -13.08 | Vertical |
| 2509.5 | -53.99 | 2.91 | 27.70 | -29.20 | -13 | -16.20 | Horizontal |
| 208.5 | -39.20 | 1.44 | 17.04 | -23.60 | -13 | -10.60 | Vertical |
| 336.5 | -42.75 | 1.76 | 17.62 | -26.89 | -13 | -13.89 | Horizontal |
| **Test Results for High Channel 844MHz** | | | | | | | |
| 1688.0 | -47.79 | 2.82 | 27.43 | -23.18 | -13 | -10.18 | Horizontal |
| 1688.0 | -51.25 | 2.82 | 27.43 | -26.64 | -13 | -13.64 | Vertical |
| 2532.0 | -45.64 | 2.92 | 27.74 | -20.82 | -13 | -7.82 | Vertical |
| 2532.0 | -53.12 | 2.92 | 27.74 | -28.30 | -13 | -15.30 | Horizontal |
| 206.2 | -40.41 | 1.74 | 17.70 | -24.45 | -13 | -11.45 | Vertical |
| 429.4 | -42.69 | 1.41 | 17.46 | -26.63 | -13 | -13.63 | Horizontal |

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

### 9.4 LTE BAND 7

**QPSK EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)**

| Test Results for Low Channel 2502.5MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 5005.0 | -59.34 | 5.23 | 35.81 | -28.76 | -25 | -3.76 | Horizontal |
| 5005.0 | -61.52 | 5.23 | 35.81 | -30.94 | -25 | -5.94 | Vertical |
| 7507.5 | -60.78 | 5.67 | 36.85 | -29.60 | -25 | -4.60 | Vertical |
| 7507.5 | -62.17 | 5.67 | 36.85 | -30.99 | -25 | -5.99 | Horizontal |
| 205.4 | -48.41 | 1.73 | 17.97 | -32.17 | -25 | -7.17 | Vertical |
| 311.6 | -52.39 | 1.38 | 15.11 | -38.66 | -25 | -13.66 | Horizontal |
| **Test Results for Mid Channel 2535MHz** | | | | | | | |
| 5070.0 | -63.93 | 5.23 | 35.82 | -33.34 | -25 | -8.34 | Horizontal |
| 5070.0 | -60.14 | 5.23 | 35.82 | -29.55 | -25 | -4.55 | Vertical |
| 7605.0 | -60.01 | 5.67 | 36.85 | -28.83 | -25 | -3.83 | Vertical |
| 7605.0 | -60.66 | 5.67 | 36.85 | -29.48 | -25 | -4.48 | Horizontal |
| 210.1 | -52.17 | 1.77 | 16.17 | -37.76 | -25 | -12.76 | Vertical |
| 422.8 | -47.53 | 1.63 | 15.21 | -33.95 | -25 | -8.95 | Horizontal |
| **Test Results for High Channel 2567.5MHz** | | | | | | | |
| 5135.0 | -60.24 | 5.24 | 35.83 | -29.65 | -25 | -4.65 | Horizontal |
| 5135.0 | -61.40 | 5.24 | 35.83 | -30.81 | -25 | -5.81 | Vertical |
| 7702.5 | -60.59 | 5.68 | 36.87 | -29.40 | -25 | -4.40 | Vertical |
| 7702.5 | -62.43 | 5.68 | 36.87 | -31.24 | -25 | -6.24 | Horizontal |
| 207.6 | -49.47 | 1.58 | 17.56 | -33.49 | -25 | -8.49 | Vertical |
| 373.8 | -48.21 | 1.45 | 16.58 | -33.08 | -25 | -8.08 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)**

| Test Results for Low Channel 2510MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 5020.0 | -62.60 | 5.23 | 35.82 | -32.01 | -25 | -7.01 | Horizontal |
| 5020.0 | -63.54 | 5.23 | 35.82 | -32.95 | -25 | -7.95 | Vertical |
| 7530.0 | -59.94 | 5.67 | 36.86 | -28.75 | -25 | -3.75 | Vertical |
| 7530.0 | -61.66 | 5.67 | 36.86 | -30.47 | -25 | -5.47 | Horizontal |
| 189.9 | -52.64 | 1.63 | 15.76 | -38.51 | -25 | -13.51 | Vertical |
| 446.9 | -54.40 | 1.71 | 15.44 | -40.67 | -25 | -15.67 | Horizontal |
| **Test Results for Mid Channel 2535MHz** | | | | | | | |
| 5070.0 | -61.12 | 5.23 | 35.82 | -30.53 | -25 | -5.53 | Horizontal |
| 5070.0 | -60.02 | 5.23 | 35.82 | -29.43 | -25 | -4.43 | Vertical |
| 7605.0 | -60.63 | 5.67 | 36.85 | -29.45 | -25 | -4.45 | Vertical |
| 7605.0 | -64.61 | 5.67 | 36.85 | -33.43 | -25 | -8.43 | Horizontal |
| 196.4 | -53.19 | 1.79 | 16.84 | -38.13 | -25 | -13.13 | Vertical |
| 410.6 | -48.00 | 1.71 | 17.64 | -32.07 | -25 | -7.07 | Horizontal |
| **Test Results for High Channel 2560MHz** | | | | | | | |
| 5120.0 | -64.90 | 5.24 | 35.83 | -34.31 | -25 | -9.31 | Horizontal |
| 5120.0 | -59.64 | 5.24 | 35.83 | -29.05 | -25 | -4.05 | Vertical |
| 7680.0 | -61.59 | 5.70 | 36.88 | -30.41 | -25 | -5.41 | Vertical |
| 7680.0 | -61.04 | 5.70 | 36.88 | -29.86 | -25 | -4.86 | Horizontal |
| 207.5 | -48.87 | 1.79 | 16.84 | -33.81 | -25 | -8.81 | Vertical |
| 447.2 | -48.08 | 1.71 | 17.64 | -32.15 | -25 | -7.15 | Horizontal |

Note: Spurious Emission Level = Spectrum Analyzer Read Value + Cable Loss+ Antenna Factor + 11.74

. Margin = Spurious Emission Level - Limit

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

### 9.5 LTE BAND 12

**QPSK EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)**

| Test Results for Low Channel 699.7MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1399.4 | -52.21 | 2.60 | 27.20 | -27.61 | -13 | -14.61 | Horizontal |
| 1399.4 | -50.36 | 2.60 | 27.20 | -25.76 | -13 | -12.76 | Vertical |
| 2099.1 | -51.86 | 2.85 | 27.54 | -27.17 | -13 | -14.17 | Vertical |
| 2099.1 | -52.72 | 2.85 | 27.54 | -28.03 | -13 | -15.03 | Horizontal |
| 211.8 | -44.85 | 1.49 | 17.78 | -28.56 | -13 | -15.56 | Vertical |
| 257.7 | -41.72 | 1.36 | 17.33 | -25.75 | -13 | -12.75 | Horizontal |
| **Test Results For Mid Channel 707.5MHz** | | | | | | | |
| 1415.0 | -49.03 | 2.61 | 27.28 | -24.36 | -13 | -11.36 | Horizontal |
| 1415.0 | -44.16 | 2.61 | 27.28 | -19.49 | -13 | -6.49 | Vertical |
| 2122.5 | -49.59 | 2.87 | 27.59 | -24.87 | -13 | -11.87 | Vertical |
| 2122.5 | -50.39 | 2.87 | 27.59 | -25.67 | -13 | -12.67 | Horizontal |
| 185.9 | -41.11 | 1.73 | 15.74 | -27.10 | -13 | -14.10 | Vertical |
| 384.4 | -37.27 | 1.62 | 15.79 | -23.10 | -13 | -10.10 | Horizontal |
| **Test Results for High Channel 715.3MHz** | | | | | | | |
| 1430.6 | -46.63 | 2.63 | 27.28 | -21.98 | -13 | -8.98 | Horizontal |
| 1430.6 | -48.39 | 2.63 | 27.28 | -23.74 | -13 | -10.74 | Vertical |
| 2145.9 | -48.48 | 2.88 | 27.60 | -23.76 | -13 | -10.76 | Vertical |
| 2145.9 | -49.48 | 2.88 | 27.60 | -24.76 | -13 | -11.76 | Horizontal |
| 184.1 | -41.55 | 1.61 | 18.00 | -25.16 | -13 | -12.16 | Vertical |
| 324.7 | -34.60 | 1.45 | 15.49 | -20.57 | -13 | -7.57 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 12 (10MHZ BANDWIDTH)**

| Test Results for Low Channel 704MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1408.0 | -52.42 | 2.61 | 27.26 | -27.77 | -13 | -14.77 | Horizontal |
| 1408.0 | -45.26 | 2.61 | 27.26 | -20.61 | -13 | -7.61 | Vertical |
| 2112.0 | -47.45 | 2.87 | 27.58 | -22.74 | -13 | -9.74 | Vertical |
| 2112.0 | -50.59 | 2.87 | 27.58 | -25.88 | -13 | -12.88 | Horizontal |
| 193.9 | -44.69 | 1.31 | 16.97 | -29.03 | -13 | -16.03 | Vertical |
| 373.1 | -34.49 | 1.65 | 16.70 | -19.44 | -13 | -6.44 | Horizontal |
| **Test Results for Mid Channel 707.5MHz** | | | | | | | |
| 1415.0 | -45.84 | 2.61 | 27.28 | -21.17 | -13 | -8.17 | Horizontal |
| 1415.0 | -45.88 | 2.61 | 27.28 | -21.21 | -13 | -8.21 | Vertical |
| 2122.5 | -52.67 | 2.87 | 27.59 | -27.95 | -13 | -14.95 | Vertical |
| 2122.5 | -50.62 | 2.87 | 27.59 | -25.90 | -13 | -12.90 | Horizontal |
| 193.7 | -39.59 | 1.72 | 17.99 | -23.32 | -13 | -10.32 | Vertical |
| 421.7 | -44.46 | 1.73 | 17.94 | -28.25 | -13 | -15.25 | Horizontal |
| **Test Results for High Channel 711MHz** | | | | | | | |
| 1422.0 | -48.80 | 2.62 | 27.28 | -24.14 | -13 | -11.14 | Horizontal |
| 1422.0 | -47.78 | 2.62 | 27.28 | -23.12 | -13 | -10.12 | Vertical |
| 2133.0 | -53.83 | 2.87 | 27.60 | -29.10 | -13 | -16.10 | Vertical |
| 2133.0 | -52.64 | 2.87 | 27.60 | -27.91 | -13 | -14.91 | Horizontal |
| 197.7 | -35.07 | 1.58 | 15.93 | -20.72 | -13 | -7.72 | Vertical |
| 274.8 | -43.25 | 1.36 | 15.59 | -29.02 | -13 | -16.02 | Horizontal |

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

### 9.6 LTE BAND 17

**QPSK EIRP POWER FOR LTE BAND 17 (5MHZ BANDWIDTH)**

| Test Results for Low Channel 706.5MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1413.0 | -52.04 | 2.61 | 27.28 | -27.37 | -13 | -14.37 | Horizontal |
| 1413.0 | -49.42 | 2.61 | 27.28 | -24.75 | -13 | -11.75 | Vertical |
| 2119.5 | -49.56 | 2.87 | 27.59 | -24.84 | -13 | -11.84 | Vertical |
| 2119.5 | -52.70 | 2.87 | 27.59 | -27.98 | -13 | -14.98 | Horizontal |
| 194.2 | -38.57 | 1.71 | 16.15 | -24.13 | -13 | -11.13 | Vertical |
| 424.0 | -34.53 | 1.41 | 17.32 | -18.62 | -13 | -5.62 | Horizontal |
| **Test Results For Mid Channel 710MHz** | | | | | | | |
| 1420.0 | -47.90 | 2.62 | 27.30 | -23.22 | -13 | -10.22 | Horizontal |
| 1420.0 | -48.81 | 2.62 | 27.30 | -24.13 | -13 | -11.13 | Vertical |
| 2130.0 | -47.06 | 2.87 | 27.62 | -22.31 | -13 | -9.31 | Vertical |
| 2130.0 | -53.65 | 2.87 | 27.62 | -28.90 | -13 | -15.90 | Horizontal |
| 183.6 | -42.96 | 1.42 | 15.25 | -29.14 | -13 | -16.14 | Vertical |
| 272.2 | -44.61 | 1.36 | 17.19 | -28.78 | -13 | -15.78 | Horizontal |
| **Test Results for High Channel 713.5MHz** | | | | | | | |
| 1427.0 | -48.00 | 2.66 | 27.28 | -23.38 | -13 | -10.38 | Horizontal |
| 1427.0 | -50.69 | 2.66 | 27.28 | -26.07 | -13 | -13.07 | Vertical |
| 2140.5 | -49.41 | 2.88 | 27.60 | -24.69 | -13 | -11.69 | Vertical |
| 2140.5 | -53.96 | 2.88 | 27.60 | -29.24 | -13 | -16.24 | Horizontal |
| 177.2 | -38.20 | 1.32 | 17.29 | -22.23 | -13 | -9.23 | Vertical |
| 452.2 | -41.67 | 1.72 | 16.89 | -26.50 | -13 | -13.50 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 17 (10MHZ BANDWIDTH)**

| Test Results for Low Channel 709MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1418.0 | -47.36 | 2.62 | 27.30 | -22.68 | -13 | -9.68 | Horizontal |
| 1418.0 | -48.37 | 2.62 | 27.30 | -23.69 | -13 | -10.69 | Vertical |
| 2127.0 | -46.52 | 2.87 | 27.62 | -21.77 | -13 | -8.77 | Vertical |
| 2127.0 | -53.23 | 2.87 | 27.62 | -28.48 | -13 | -15.48 | Horizontal |
| 195.1 | -43.30 | 1.35 | 16.91 | -27.74 | -13 | -14.74 | Vertical |
| 412.0 | -41.18 | 1.62 | 16.31 | -26.49 | -13 | -13.49 | Horizontal |
| **Test Results for Mid Channel 710MHz** | | | | | | | |
| 1420.0 | -45.29 | 2.62 | 27.30 | -20.61 | -13 | -7.61 | Horizontal |
| 1420.0 | -50.51 | 2.62 | 27.30 | -25.83 | -13 | -12.83 | Vertical |
| 2130.0 | -52.94 | 2.87 | 27.62 | -28.19 | -13 | -15.19 | Vertical |
| 2130.0 | -50.34 | 2.87 | 27.62 | -25.59 | -13 | -12.59 | Horizontal |
| 204.9 | -42.35 | 1.51 | 17.14 | -26.72 | -13 | -13.72 | Vertical |
| 451.2 | -44.97 | 1.77 | 16.88 | -29.86 | -13 | -16.86 | Horizontal |
| **Test Results for High Channel 711MHz** | | | | | | | |
| 1422.0 | -53.32 | 2.62 | 27.30 | -28.64 | -13 | -15.64 | Horizontal |
| 1422.0 | -48.51 | 2.62 | 27.30 | -23.83 | -13 | -10.83 | Vertical |
| 2133.0 | -45.42 | 2.87 | 27.62 | -20.67 | -13 | -7.67 | Vertical |
| 2133.0 | -50.25 | 2.87 | 27.62 | -25.50 | -13 | -12.50 | Horizontal |
| 190.9 | -40.71 | 1.78 | 15.95 | -26.54 | -13 | -13.54 | Vertical |
| 330.8 | -38.69 | 1.34 | 17.95 | -22.09 | -13 | -9.09 | Horizontal |

Note: Spurious Emission Level = Spectrum Analyzer Read Value + Cable Loss+ Antenna Factor + 11.74

. Margin = Spurious Emission Level - Limit

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

## 9.7 LTE BAND 25

**QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)**

| Test Results for Low Channel 1710.7MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 3701.4 | -48.50 | 4.02 | 29.80 | -22.72 | -13 | -9.72 | Horizontal |
| 3701.4 | -49.47 | 4.02 | 29.80 | -23.69 | -13 | -10.69 | Vertical |
| 5552.1 | -49.80 | 5.24 | 35.84 | -19.20 | -13 | -6.20 | Vertical |
| 5552.1 | -46.50 | 5.24 | 35.84 | -15.90 | -13 | -2.90 | Horizontal |
| 93.9 | -33.93 | 1.59 | 15.11 | -20.41 | -13 | -7.41 | Vertical |
| 119.7 | -33.05 | 1.80 | 15.61 | -19.24 | -13 | -6.24 | Horizontal |
| **Test Results for Mid Channel 1732.5MHz** | | | | | | | |
| 3765.0 | -47.35 | 4.03 | 30.00 | -21.38 | -13 | -8.38 | Horizontal |
| 3765.0 | -43.61 | 4.03 | 30.00 | -17.64 | -13 | -4.64 | Vertical |
| 5647.5 | -48.64 | 5.25 | 35.86 | -18.03 | -13 | -5.03 | Vertical |
| 5647.5 | -46.39 | 5.25 | 35.86 | -15.78 | -13 | -2.78 | Horizontal |
| 166.1 | -34.94 | 1.37 | 15.62 | -20.69 | -13 | -7.69 | Vertical |
| 274.4 | -33.75 | 1.55 | 17.51 | -17.79 | -13 | -4.79 | Horizontal |
| **Test Results for High Channel 1754.3MHz** | | | | | | | |
| 3828.6 | -48.51 | 4.05 | 30.01 | -22.55 | -13 | -9.55 | Horizontal |
| 3828.6 | -43.55 | 4.05 | 30.01 | -17.59 | -13 | -4.59 | Vertical |
| 5742.9 | -48.16 | 5.26 | 35.86 | -17.56 | -13 | -4.56 | Vertical |
| 5742.9 | -48.65 | 5.26 | 35.86 | -18.05 | -13 | -5.05 | Horizontal |
| 108.6 | -33.44 | 1.66 | 17.19 | -17.91 | -13 | -4.91 | Vertical |
| 138.7 | -34.67 | 1.35 | 17.94 | -18.08 | -13 | -5.08 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 25 (20MHZ BANDWIDTH)**

| Test Results for Low Channel 1720MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 3720.0 | -49.27 | 4.02 | 29.80 | -23.49 | -13 | -10.49 | Horizontal |
| 3720.0 | -45.95 | 4.02 | 29.80 | -20.17 | -13 | -7.17 | Vertical |
| 5580.0 | -48.56 | 5.24 | 35.84 | -17.96 | -13 | -4.96 | Vertical |
| 5580.0 | -48.03 | 5.24 | 35.84 | -17.43 | -13 | -4.43 | Horizontal |
| 146.2 | -33.29 | 1.70 | 15.24 | -19.75 | -13 | -6.75 | Vertical |
| 215.4 | -33.71 | 1.42 | 16.58 | -18.55 | -13 | -5.55 | Horizontal |
| **Test Results for Mid Channel 1732.5MHz** | | | | | | | |
| 3765.0 | -48.56 | 4.03 | 30.00 | -22.59 | -13 | -9.59 | Horizontal |
| 3765.0 | -44.94 | 4.03 | 30.00 | -18.97 | -13 | -5.97 | Vertical |
| 5647.5 | -48.17 | 5.25 | 35.86 | -17.56 | -13 | -4.56 | Vertical |
| 5647.5 | -49.66 | 5.25 | 35.86 | -19.05 | -13 | -6.05 | Horizontal |
| 132.2 | -32.87 | 1.64 | 16.16 | -18.35 | -13 | -5.35 | Vertical |
| 133.3 | -33.42 | 1.62 | 17.37 | -17.67 | -13 | -4.67 | Horizontal |
| **Test Results for High Channel 1745MHz** | | | | | | | |
| 3810.0 | -49.06 | 2.91 | 27.68 | -24.29 | -13 | -11.29 | Horizontal |
| 3810.0 | -45.25 | 2.91 | 27.68 | -20.48 | -13 | -7.48 | Vertical |
| 5715.0 | -48.83 | 5.26 | 35.86 | -18.23 | -13 | -5.23 | Vertical |
| 5715.0 | -48.65 | 5.26 | 35.86 | -18.05 | -13 | -5.05 | Horizontal |
| 212.6 | -34.16 | 1.49 | 15.29 | -20.36 | -13 | -7.36 | Vertical |
| 275.8 | -34.76 | 1.79 | 16.42 | -20.13 | -13 | -7.13 | Horizontal |

### 9.8 LTE BAND 26 A

**QPSK EIRP POWER FOR LTE BAND 26A(814MHz~824MHz) (1.4MHZ BANDWIDTH)**

| Test Results for Low Channel 814.7MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1629.4 | -47.30 | 2.78 | 27.50 | -22.58 | -13 | -9.58 | Horizontal |
| 1629.4 | -48.20 | 2.78 | 27.50 | -23.48 | -13 | -10.48 | Vertical |
| 2444.1 | -46.07 | 2.90 | 27.80 | -21.17 | -13 | -8.17 | Vertical |
| 2444.1 | -46.01 | 2.90 | 27.80 | -21.11 | -13 | -8.11 | Horizontal |
| 229.6 | -34.34 | 1.54 | 16.98 | -18.90 | -13 | -5.90 | Vertical |
| 83.3 | -32.59 | 1.47 | 15.82 | -18.24 | -13 | -5.24 | Horizontal |
| **Test Results For Mid Channel 819MHz** | | | | | | | |
| 1638.0 | -48.52 | 2.80 | 27.48 | -23.84 | -13 | -10.84 | Horizontal |
| 1638.0 | -43.16 | 2.80 | 27.48 | -18.48 | -13 | -5.48 | Vertical |
| 2457.0 | -48.87 | 2.91 | 27.70 | -24.08 | -13 | -11.08 | Vertical |
| 2457.0 | -46.10 | 2.91 | 27.70 | -21.31 | -13 | -8.31 | Horizontal |
| 168.2 | -34.29 | 1.74 | 16.19 | -19.84 | -13 | -6.84 | Vertical |
| 92.9 | -34.86 | 1.46 | 15.43 | -20.89 | -13 | -7.89 | Horizontal |
| **Test Results for High Channel 823.3MHz** | | | | | | | |
| 1646.6 | -48.84 | 2.82 | 27.43 | -24.23 | -13 | -11.23 | Horizontal |
| 1646.6 | -49.88 | 2.82 | 27.43 | -25.27 | -13 | -12.27 | Vertical |
| 2469.9 | -47.48 | 2.92 | 27.74 | -22.66 | -13 | -9.66 | Vertical |
| 2469.9 | -48.08 | 2.92 | 27.74 | -23.26 | -13 | -10.26 | Horizontal |
| 213.1 | -32.34 | 1.67 | 17.05 | -16.96 | -13 | -3.96 | Vertical |
| 121.7 | -33.54 | 1.42 | 16.12 | -18.84 | -13 | -5.84 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 26A(814MHz~824MHz) (10MHZ BANDWIDTH)**

| Test Results for Channel 819MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1638.0 | -48.61 | 2.78 | 27.50 | -23.89 | -13 | -10.89 | Horizontal |
| 1638.0 | -43.24 | 2.78 | 27.50 | -18.52 | -13 | -5.52 | Vertical |
| 2457.0 | -48.27 | 2.90 | 27.80 | -23.37 | -13 | -10.37 | Vertical |
| 2457.0 | -46.93 | 2.90 | 27.80 | -22.03 | -13 | -9.03 | Horizontal |
| 253.7 | -34.56 | 1.43 | 17.34 | -18.65 | -13 | -5.65 | Vertical |
| 256.8 | -32.00 | 1.56 | 15.71 | -17.85 | -13 | -4.85 | Horizontal |

### 9.9 LTE BAND 26 B

**QPSK EIRP POWER FOR LTE BAND 26B(824MHz~849MHz) (1.4MHZ BANDWIDTH)**

| Test Results for Low Channel 824.7MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1649.4 | -46.37 | 2.78 | 27.50 | -21.65 | -13 | -8.65 | Horizontal |
| 1649.4 | -49.53 | 2.78 | 27.50 | -24.81 | -13 | -11.81 | Vertical |
| 2474.1 | -46.30 | 2.90 | 27.80 | -21.40 | -13 | -8.40 | Vertical |
| 2474.1 | -46.25 | 2.90 | 27.80 | -21.35 | -13 | -8.35 | Horizontal |
| 237.0 | -34.45 | 1.33 | 17.34 | -18.44 | -13 | -5.44 | Vertical |
| 180.5 | -34.78 | 1.47 | 16.80 | -19.45 | -13 | -6.45 | Horizontal |
| **Test Results For Mid Channel 836.5MHz** | | | | | | | |
| 1673.0 | -49.47 | 2.80 | 27.48 | -24.79 | -13 | -11.79 | Horizontal |
| 1673.0 | -47.01 | 2.80 | 27.48 | -22.33 | -13 | -9.33 | Vertical |
| 2509.5 | -46.68 | 2.91 | 27.70 | -21.89 | -13 | -8.89 | Vertical |
| 2509.5 | -46.11 | 2.91 | 27.70 | -21.32 | -13 | -8.32 | Horizontal |
| 140.8 | -34.16 | 1.75 | 15.46 | -20.45 | -13 | -7.45 | Vertical |
| 90.6 | -33.65 | 1.52 | 16.14 | -19.03 | -13 | -6.03 | Horizontal |
| **Test Results for High Channel 848.3MHz** | | | | | | | |
| 1696.6 | -48.43 | 2.82 | 27.43 | -23.82 | -13 | -10.82 | Horizontal |
| 1696.6 | -45.14 | 2.82 | 27.43 | -20.53 | -13 | -7.53 | Vertical |
| 2544.9 | -48.62 | 2.92 | 27.74 | -23.80 | -13 | -10.80 | Vertical |
| 2544.9 | -46.77 | 2.92 | 27.74 | -21.95 | -13 | -8.95 | Horizontal |
| 171.4 | -32.26 | 1.67 | 16.09 | -17.84 | -13 | -4.84 | Vertical |
| 247.2 | -34.11 | 1.80 | 17.55 | -18.36 | -13 | -5.36 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 26B(824MHz~849MHz) (15MHZ BANDWIDTH)**

| Test Results for Low Channel 831.5MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 1663.0 | -48.99 | 2.78 | 27.50 | -24.27 | -13 | -11.27 | Horizontal |
| 1663.0 | -43.90 | 2.78 | 27.50 | -19.18 | -13 | -6.18 | Vertical |
| 2494.5 | -48.23 | 2.90 | 27.80 | -23.33 | -13 | -10.33 | Vertical |
| 2494.5 | -49.32 | 2.90 | 27.80 | -24.42 | -13 | -11.42 | Horizontal |
| 255.4 | -34.16 | 1.52 | 15.72 | -19.96 | -13 | -6.96 | Vertical |
| 163.1 | -33.16 | 1.40 | 17.03 | -17.53 | -13 | -4.53 | Horizontal |
| **Test Results for Mid Channel 836.5MHz** | | | | | | | |
| 1673.0 | -48.31 | 2.80 | 27.48 | -23.63 | -13 | -10.63 | Horizontal |
| 1673.0 | -49.84 | 2.80 | 27.48 | -25.16 | -13 | -12.16 | Vertical |
| 2509.5 | -46.73 | 2.91 | 27.70 | -21.94 | -13 | -8.94 | Vertical |
| 2509.5 | -46.27 | 2.91 | 27.70 | -21.48 | -13 | -8.48 | Horizontal |
| 227.1 | -32.95 | 1.74 | 16.38 | -18.31 | -13 | -5.31 | Vertical |
| 101.3 | -32.14 | 1.79 | 15.20 | -18.73 | -13 | -5.73 | Horizontal |
| **Test Results for High Channel841.5MHz** | | | | | | | |
| 1683.0 | -46.13 | 2.82 | 27.43 | -21.52 | -13 | -8.52 | Horizontal |
| 1683.0 | -49.65 | 2.82 | 27.43 | -25.04 | -13 | -12.04 | Vertical |
| 2524.5 | -47.24 | 2.92 | 27.74 | -22.42 | -13 | -9.42 | Vertical |
| 2524.5 | -47.79 | 2.92 | 27.74 | -22.97 | -13 | -9.97 | Horizontal |
| 261.1 | -34.56 | 1.78 | 17.44 | -18.90 | -13 | -5.90 | Vertical |
| 120.1 | -33.51 | 1.70 | 15.93 | -19.28 | -13 | -6.28 | Horizontal |

### 9.10 LTE BAND 38

**QPSK EIRP POWER FOR LTE BAND 38 (5MHZ BANDWIDTH)**

| Test Results for Low Channel 2572.5MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit（dBm） | Margin(dBm) | Polarity |
| 5145 | -53.72 | 4.01 | 27.5 | -30.23 | -25 | -5.23 | Horizontal |
| 5145 | -50.48 | 4.01 | 27.5 | -26.99 | -25 | -1.99 | Vertical |
| 7717.5 | -51.75 | 5.09 | 27.8 | -29.04 | -25 | -4.04 | Vertical |
| 7717.5 | -50.18 | 5.09 | 27.8 | -27.47 | -25 | -2.47 | Horizontal |
| **Test Results for Mid Channel 2595MHz** | | | | | | | |
| 5190 | -50.38 | 4.1 | 27.48 | -27.00 | -25 | -2.00 | Horizontal |
| 5190 | -50.92 | 4.1 | 27.48 | -27.54 | -25 | -2.54 | Vertical |
| 7785 | -50.11 | 5.42 | 27.7 | -27.83 | -25 | -2.83 | Vertical |
| 7785 | -54.19 | 5.42 | 27.7 | -31.91 | -25 | -6.91 | Horizontal |
| **Test Results for High Channel 2617.5MHz** | | | | | | | |
| 5234 | -51.55 | 4.11 | 27.43 | -28.23 | -25 | -3.23 | Horizontal |
| 5234 | -50.20 | 4.11 | 27.43 | -26.88 | -25 | -1.88 | Vertical |
| 7851 | -54.28 | 5.31 | 27.74 | -31.85 | -25 | -6.85 | Vertical |
| 7851 | -53.69 | 5.31 | 27.74 | -31.26 | -25 | -6.26 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 38 (20MHZ BANDWIDTH)**

| Test Results for Low Channel 2580MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit（dBm） | Margin(dBm) | Polarity |
| 5160 | -53.55 | 3.89 | 27.5 | -29.94 | -25 | -4.94 | Horizontal |
| 5160 | -50.07 | 3.89 | 27.5 | -26.46 | -25 | -1.46 | Vertical |
| 7740 | -54.25 | 5.33 | 27.8 | -31.78 | -25 | -6.78 | Vertical |
| 7740 | -50.92 | 5.33 | 27.8 | -28.45 | -25 | -3.45 | Horizontal |
| **Test Results for Mid Channel 2595MHz** | | | | | | | |
| 5190 | -52.85 | 4.1 | 27.48 | -29.47 | -25 | -4.47 | Horizontal |
| 5190 | -51.52 | 4.1 | 27.48 | -28.14 | -25 | -3.14 | Vertical |
| 7785 | -52.87 | 5.42 | 27.7 | -30.59 | -25 | -5.59 | Vertical |
| 7785 | -49.27 | 5.42 | 27.7 | -26.99 | -25 | -1.99 | Horizontal |
| **Test Results for High Channel 2610MHz** | | | | | | | |
| 5220 | -53.32 | 4.01 | 27.43 | -29.90 | -25 | -4.90 | Horizontal |
| 5220 | -51.38 | 4.01 | 27.43 | -27.96 | -25 | -2.96 | Vertical |
| 7830 | -50.24 | 5.34 | 27.74 | -27.84 | -25 | -2.84 | Vertical |
| 7830 | -50.80 | 5.34 | 27.74 | -28.40 | -25 | -3.40 | Horizontal |

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. We test both H direction and V direction, recorded worst case direction.

Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

### 9.11 LTE BAND 41

**QPSK EIRP POWER FOR LTE BAND 41 (5MHZ BANDWIDTH)**

| Test Results for Low Channel 2537.5MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit（dBm） | Margin(dBm) | Polarity |
| 5075.0 | -59.82 | 5.23 | 35.81 | -29.24 | -25 | -4.24 | Horizontal |
| 5075.0 | -62.10 | 5.23 | 35.81 | -31.52 | -25 | -6.52 | Vertical |
| 7612.5 | -60.79 | 5.67 | 36.85 | -29.61 | -25 | -4.61 | Vertical |
| 7612.5 | -63.05 | 5.67 | 36.85 | -31.87 | -25 | -6.87 | Horizontal |
| 435.3 | -45.49 | 1.38 | 15.98 | -30.89 | -25 | -5.89 | Vertical |
| 465.8 | -49.29 | 1.62 | 15.66 | -35.25 | -25 | -10.25 | Horizontal |
| **Test Results for Mid Channel 2595MHz** | | | | | | | |
| 5190.0 | -59.84 | 5.23 | 35.82 | -29.25 | -25 | -4.25 | Horizontal |
| 5190.0 | -62.91 | 5.23 | 35.82 | -32.32 | -25 | -7.32 | Vertical |
| 7785.0 | -62.72 | 5.67 | 36.85 | -31.54 | -25 | -6.54 | Vertical |
| 7785.0 | -61.01 | 5.67 | 36.85 | -29.83 | -25 | -4.83 | Horizontal |
| 510.4 | -48.79 | 1.62 | 16.17 | -34.24 | -25 | -9.24 | Vertical |
| 562.9 | -49.08 | 1.74 | 17.63 | -33.19 | -25 | -8.19 | Horizontal |
| **Test Results for High Channel 2652.5MHz** | | | | | | | |
| 5305.0 | -61.24 | 5.24 | 35.83 | -30.65 | -25 | -5.65 | Horizontal |
| 5305.0 | -59.77 | 5.24 | 35.83 | -29.18 | -25 | -4.18 | Vertical |
| 7957.5 | -59.02 | 5.68 | 36.87 | -27.83 | -25 | -2.83 | Vertical |
| 7957.5 | -61.67 | 5.68 | 36.87 | -30.48 | -25 | -5.48 | Horizontal |
| 197.6 | -45.37 | 1.55 | 15.84 | -31.08 | -25 | -6.08 | Vertical |
| 353.1 | -47.11 | 1.51 | 17.06 | -31.56 | -25 | -6.56 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 41 (20MHZ BANDWIDTH)**

| Test Results for Low Channel 2545MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit（dBm） | Margin(dBm) | Polarity |
| 5090.0 | -59.87 | 5.23 | 35.82 | -29.28 | -25 | -4.28 | Horizontal |
| 5090.0 | -64.03 | 5.23 | 35.82 | -33.44 | -25 | -8.44 | Vertical |
| 7635.0 | -61.29 | 5.67 | 36.86 | -30.10 | -25 | -5.10 | Vertical |
| 7635.0 | -61.82 | 5.67 | 36.86 | -30.63 | -25 | -5.63 | Horizontal |
| 128.9 | -44.71 | 1.43 | 15.51 | -30.63 | -25 | -5.63 | Vertical |
| 344.8 | -49.12 | 1.40 | 16.97 | -33.55 | -25 | -8.55 | Horizontal |
| **Test Results for Mid Channel 2595MHz** | | | | | | | |
| 5190.0 | -62.27 | 5.23 | 35.82 | -31.68 | -25 | -6.68 | Horizontal |
| 5190.0 | -62.84 | 5.23 | 35.82 | -32.25 | -25 | -7.25 | Vertical |
| 7785.0 | -61.15 | 5.67 | 36.85 | -29.97 | -25 | -4.97 | Vertical |
| 7785.0 | -60.84 | 5.67 | 36.85 | -29.66 | -25 | -4.66 | Horizontal |
| 100.8 | -46.52 | 1.77 | 16.72 | -31.57 | -25 | -6.57 | Vertical |
| 263.5 | -46.89 | 1.31 | 16.99 | -31.21 | -25 | -6.21 | Horizontal |
| **Test Results for High Channel 2645MHz** | | | | | | | |
| 5290.0 | -64.20 | 5.24 | 35.83 | -33.61 | -25 | -8.61 | Horizontal |
| 5290.0 | -59.80 | 5.24 | 35.83 | -29.21 | -25 | -4.21 | Vertical |
| 7935.0 | -60.65 | 5.70 | 36.88 | -29.47 | -25 | -4.47 | Vertical |
| 7935.0 | -63.79 | 5.70 | 36.88 | -32.61 | -25 | -7.61 | Horizontal |
| 349.9 | -45.45 | 1.70 | 15.73 | -31.42 | -25 | -6.42 | Vertical |
| 110.3 | -46.75 | 1.75 | 17.33 | -31.17 | -25 | -6.17 | Horizontal |

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. We test both H direction and V direction, recorded worst case direction.

Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

### 9.12 LTE BAND 66

**QPSK EIRP POWER FOR LTE BAND 66 (1.4MHZ BANDWIDTH)**

| Test Results for Low Channel 1710.7MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 3421.4 | -47.58 | 4.02 | 29.80 | -21.80 | -13 | -8.80 | Horizontal |
| 3421.4 | -46.45 | 4.02 | 29.80 | -20.67 | -13 | -7.67 | Vertical |
| 5132.1 | -49.55 | 5.24 | 35.84 | -18.95 | -13 | -5.95 | Vertical |
| 5132.1 | -53.59 | 5.24 | 35.84 | -22.99 | -13 | -9.99 | Horizontal |
| 112.6 | -51.23 | 1.52 | 15.57 | -37.18 | -13 | -24.18 | Vertical |
| 220.5 | -46.77 | 1.33 | 17.14 | -30.96 | -13 | -17.96 | Horizontal |
| **Test Results for Mid Channel 1745MHz** | | | | | | | |
| 3490.0 | -52.86 | 4.03 | 30.00 | -26.89 | -13 | -13.89 | Horizontal |
| 3490.0 | -44.60 | 4.03 | 30.00 | -18.63 | -13 | -5.63 | Vertical |
| 5235.0 | -52.59 | 5.25 | 35.86 | -21.98 | -13 | -8.98 | Vertical |
| 5235.0 | -50.13 | 5.25 | 35.86 | -19.52 | -13 | -6.52 | Horizontal |
| 157.3 | -51.75 | 1.53 | 17.13 | -36.15 | -13 | -23.15 | Vertical |
| 213.1 | -48.72 | 1.41 | 15.95 | -34.18 | -13 | -21.18 | Horizontal |
| **Test Results for High Channel 1779.3MHz** | | | | | | | |
| 3558.6 | -48.08 | 4.05 | 30.01 | -22.12 | -13 | -9.12 | Horizontal |
| 3558.6 | -45.03 | 4.05 | 30.01 | -19.07 | -13 | -6.07 | Vertical |
| 5337.9 | -54.04 | 5.26 | 35.86 | -23.44 | -13 | -10.44 | Vertical |
| 5337.9 | -51.46 | 5.26 | 35.86 | -20.86 | -13 | -7.86 | Horizontal |
| 170.6 | -53.23 | 1.44 | 15.51 | -39.16 | -13 | -26.16 | Vertical |
| 169.0 | -44.30 | 1.78 | 15.76 | -30.32 | -13 | -17.32 | Horizontal |

**QPSK EIRP POWER FOR LTE BAND 66 (20MHZ BANDWIDTH)**

| Test Results for Low Channel 1720MHz | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency(MHz) | SG Level(dBm) | Cable Loss(dB) | Antenna Factor(dB) | Absolute Level(dBm) | Limit （dBm） | Margin(dBm) | Polarity |
| 3440.0 | -51.15 | 4.02 | 29.80 | -25.37 | -13 | -12.37 | Horizontal |
| 3440.0 | -51.02 | 4.02 | 29.80 | -25.24 | -13 | -12.24 | Vertical |
| 5160.0 | -49.04 | 5.24 | 35.84 | -18.44 | -13 | -5.44 | Vertical |
| 5160.0 | -48.06 | 5.24 | 35.84 | -17.46 | -13 | -4.46 | Horizontal |
| 268.8 | -52.87 | 1.62 | 17.02 | -37.47 | -13 | -24.47 | Vertical |
| 161.4 | -48.15 | 1.32 | 17.31 | -32.16 | -13 | -19.16 | Horizontal |
| **Test Results for Mid Channel 1745MHz** | | | | | | | |
| 3490.0 | -49.01 | 4.03 | 30.00 | -23.04 | -13 | -10.04 | Horizontal |
| 3490.0 | -45.31 | 4.03 | 30.00 | -19.34 | -13 | -6.34 | Vertical |
| 5235.0 | -52.76 | 5.25 | 35.86 | -22.15 | -13 | -9.15 | Vertical |
| 5235.0 | -47.39 | 5.25 | 35.86 | -16.78 | -13 | -3.78 | Horizontal |
| 159.9 | -51.67 | 1.45 | 15.17 | -37.95 | -13 | -24.95 | Vertical |
| 172.1 | -53.59 | 1.48 | 17.82 | -37.25 | -13 | -24.25 | Horizontal |
| **Test Results for High Channel 1770MHz** | | | | | | | |
| 3540.0 | -50.01 | 2.91 | 27.68 | -25.24 | -13 | -12.24 | Horizontal |
| 3540.0 | -48.83 | 2.91 | 27.68 | -24.06 | -13 | -11.06 | Vertical |
| 5310.0 | -50.85 | 5.26 | 35.86 | -20.25 | -13 | -7.25 | Vertical |
| 5310.0 | -47.49 | 5.26 | 35.86 | -16.89 | -13 | -3.89 | Horizontal |
| 197.3 | -46.08 | 1.76 | 16.38 | -31.46 | -13 | -18.46 | Vertical |
| 158.5 | -48.77 | 1.43 | 17.13 | -33.07 | -13 | -20.07 | Horizontal |

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. We test both H direction and V direction, recorded worst case direction.

Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

# 10. FREQUENCY STABILITY

**RULE PART(S)**

FCC: §2.1055, §22.355, §24.235, §27.54, §90.213

**LIMITS**

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

**TEST PROCEDURE**

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30° to +50°C
- Voltage =low voltage, DC3.27V, Normal, DC 3.85V and High voltage, DC 4.43V.

**Frequency Stability vs Temperature:**

The EUT is place inside a temperature chamber. The temperature is set to -30ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

**Frequency Stability vs Voltage:**

The peak frequency error is recorded (worst-case).

**MODES TESTED**

LTE Band 2/4/5/7/12/17/25/26/38/41/66

**RESULTS**

See the following pages.

## 10.1 LTE BAND 2

**Band 2 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 1880 | 12.6 | 0.006704 | 2.5 |
| 3.85 | 1880 | 13.6 | 0.007215 | 2.5 |
| 4.43 | 1880 | 12.9 | 0.006856 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 1880 | 12.6 | 0.006722 | 2.5 |
| Extreme (50C) | 1880 | 11.1 | 0.005924 | 2.5 |
| Extreme (40C) | 1880 | 13.2 | 0.007024 | 2.5 |
| Extreme (30C) | 1880 | 13.2 | 0.007011 | 2.5 |
| Extreme (10C) | 1880 | 14.0 | 0.007471 | 2.5 |
| Extreme (0C) | 1880 | 11.8 | 0.006302 | 2.5 |
| Extreme (-10C) | 1880 | 13.3 | 0.007067 | 2.5 |
| Extreme (-20C) | 1880 | 14.0 | 0.007470 | 2.5 |
| Extreme (-30C) | 1880 | 14.3 | 0.007609 | 2.5 |

**Band 2 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 1880 | 9.3 | 0.004963 | 2.5 |
| 3.85 | 1880 | 9.4 | 0.004985 | 2.5 |
| 4.43 | 1880 | 7.7 | 0.004114 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 1880 | 10.1 | 0.005350 | 2.5 |
| Extreme (50C) | 1880 | 9.1 | 0.004814 | 2.5 |
| Extreme (40C) | 1880 | 7.9 | 0.004208 | 2.5 |
| Extreme (30C) | 1880 | 9.1 | 0.004831 | 2.5 |
| Extreme (10C) | 1880 | 8.6 | 0.004551 | 2.5 |
| Extreme (0C) | 1880 | 8.2 | 0.004350 | 2.5 |
| Extreme (-10C) | 1880 | 9.4 | 0.005002 | 2.5 |
| Extreme (-20C) | 1880 | 8.6 | 0.004597 | 2.5 |
| Extreme (-30C) | 1880 | 7.7 | 0.004113 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.2 LTE BAND 4

**Band 4 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 1732.5 | 9.2 | 0.005292 | 2.5 |
| 3.85 | 1732.5 | 8.6 | 0.004990 | 2.5 |
| 4.43 | 1732.5 | 8.2 | 0.004709 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 1732.5 | 8.8 | 0.005096 | 2.5 |
| Extreme (50C) | 1732.5 | 9.3 | 0.005367 | 2.5 |
| Extreme (40C) | 1732.5 | 7.0 | 0.004046 | 2.5 |
| Extreme (30C) | 1732.5 | 5.5 | 0.003188 | 2.5 |
| Extreme (10C) | 1732.5 | 7.2 | 0.004164 | 2.5 |
| Extreme (0C) | 1732.5 | 9.5 | 0.005487 | 2.5 |
| Extreme (-10C) | 1732.5 | 8.3 | 0.004805 | 2.5 |
| Extreme (-20C) | 1732.5 | 7.0 | 0.004067 | 2.5 |
| Extreme (-30C) | 1732.5 | 7.9 | 0.004562 | 2.5 |

**Band 4 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 1732.5 | 10.0 | 0.005773 | 2.5 |
| 3.85 | 1732.5 | 8.5 | 0.004897 | 2.5 |
| 4.43 | 1732.5 | 8.5 | 0.004898 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 1732.5 | 9.4 | 0.005427 | 2.5 |
| Extreme (50C) | 1732.5 | 9.3 | 0.005391 | 2.5 |
| Extreme (40C) | 1732.5 | 7.9 | 0.004532 | 2.5 |
| Extreme (30C) | 1732.5 | 8.9 | 0.005121 | 2.5 |
| Extreme (10C) | 1732.5 | 8.6 | 0.004958 | 2.5 |
| Extreme (0C) | 1732.5 | 8.5 | 0.004912 | 2.5 |
| Extreme (-10C) | 1732.5 | 8.9 | 0.005143 | 2.5 |
| Extreme (-20C) | 1732.5 | 9.1 | 0.005235 | 2.5 |
| Extreme (-30C) | 1732.5 | 8.5 | 0.004927 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.3 LTE BAND 5

**Band 5 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 836.5 | 5.4 | 0.006399 | 2.5 |
| 3.85 | 836.5 | 6.6 | 0.007873 | 2.5 |
| 4.43 | 836.5 | 4.7 | 0.005632 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 836.5 | 6.4 | 0.007594 | 2.5 |
| Extreme (50C) | 836.5 | 5.6 | 0.006754 | 2.5 |
| Extreme (40C) | 836.5 | 5.8 | 0.006955 | 2.5 |
| Extreme (30C) | 836.5 | 6.6 | 0.007918 | 2.5 |
| Extreme (10C) | 836.5 | 5.3 | 0.006392 | 2.5 |
| Extreme (0C) | 836.5 | 5.1 | 0.006138 | 2.5 |
| Extreme (-10C) | 836.5 | 5.5 | 0.006577 | 2.5 |
| Extreme (-20C) | 836.5 | 5.7 | 0.006840 | 2.5 |
| Extreme (-30C) | 836.5 | 6.8 | 0.008076 | 2.5 |

**Band 5 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 836.5 | 5.3 | 0.006369 | 2.5 |
| 3.85 | 836.5 | 7.1 | 0.008538 | 2.5 |
| 4.43 | 836.5 | 5.0 | 0.005971 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 836.5 | 6.3 | 0.007560 | 2.5 |
| Extreme (50C) | 836.5 | 5.5 | 0.006558 | 2.5 |
| Extreme (40C) | 836.5 | 5.9 | 0.007050 | 2.5 |
| Extreme (30C) | 836.5 | 6.8 | 0.008086 | 2.5 |
| Extreme (10C) | 836.5 | 5.7 | 0.006837 | 2.5 |
| Extreme (0C) | 836.5 | 5.3 | 0.006349 | 2.5 |
| Extreme (-10C) | 836.5 | 5.7 | 0.006838 | 2.5 |
| Extreme (-20C) | 836.5 | 6.2 | 0.007405 | 2.5 |
| Extreme (-30C) | 836.5 | 6.5 | 0.007821 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.4 LTE BAND 7

**Band 7 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 2535 | 9.5 | 0.003765 | 2.5 |
| 3.85 | 2535 | 8.9 | 0.003529 | 2.5 |
| 4.43 | 2535 | 8.4 | 0.003296 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 2535 | 9.3 | 0.003685 | 2.5 |
| Extreme (50C) | 2535 | 9.4 | 0.003698 | 2.5 |
| Extreme (40C) | 2535 | 8.3 | 0.003283 | 2.5 |
| Extreme (30C) | 2535 | 8.6 | 0.003384 | 2.5 |
| Extreme (10C) | 2535 | 8.3 | 0.003269 | 2.5 |
| Extreme (0C) | 2535 | 8.8 | 0.003456 | 2.5 |
| Extreme (-10C) | 2535 | 9.2 | 0.003623 | 2.5 |
| Extreme (-20C) | 2535 | 9.1 | 0.003586 | 2.5 |
| Extreme (-30C) | 2535 | 8.8 | 0.003453 | 2.5 |

**Band 7 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 2535 | 6.3 | 0.002504 | 2.5 |
| 3.85 | 2535 | 6.4 | 0.002538 | 2.5 |
| 4.43 | 2535 | 5.5 | 0.002168 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 2535 | 6.4 | 0.002507 | 2.5 |
| Extreme (50C) | 2535 | 5.7 | 0.002261 | 2.5 |
| Extreme (40C) | 2535 | 5.5 | 0.002178 | 2.5 |
| Extreme (30C) | 2535 | 7.1 | 0.002795 | 2.5 |
| Extreme (10C) | 2535 | 5.9 | 0.002316 | 2.5 |
| Extreme (0C) | 2535 | 4.9 | 0.001946 | 2.5 |
| Extreme (-10C) | 2535 | 5.6 | 0.002222 | 2.5 |
| Extreme (-20C) | 2535 | 5.8 | 0.002303 | 2.5 |
| Extreme (-30C) | 2535 | 5.5 | 0.002165 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.5 LTE BAND 12

**Band 12 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 707.5 | 8.4 | 0.011935 | 2.5 |
| 3.85 | 707.5 | 10.3 | 0.014610 | 2.5 |
| 4.43 | 707.5 | 8.4 | 0.011818 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 707.5 | 8.5 | 0.012044 | 2.5 |
| Extreme (50C) | 707.5 | 7.6 | 0.010778 | 2.5 |
| Extreme (40C) | 707.5 | 7.8 | 0.010999 | 2.5 |
| Extreme (30C) | 707.5 | 8.4 | 0.011858 | 2.5 |
| Extreme (10C) | 707.5 | 7.9 | 0.011127 | 2.5 |
| Extreme (0C) | 707.5 | 9.1 | 0.012871 | 2.5 |
| Extreme (-10C) | 707.5 | 8.4 | 0.011851 | 2.5 |
| Extreme (-20C) | 707.5 | 8.4 | 0.011899 | 2.5 |
| Extreme (-30C) | 707.5 | 8.0 | 0.011299 | 2.5 |

**Band 12 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 707.5 | 7.8 | 0.011078 | 2.5 |
| 3.85 | 707.5 | 8.4 | 0.011872 | 2.5 |
| 4.43 | 707.5 | 7.1 | 0.010030 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 707.5 | 6.5 | 0.009175 | 2.5 |
| Extreme (50C) | 707.5 | 5.5 | 0.007765 | 2.5 |
| Extreme (40C) | 707.5 | 6.4 | 0.009110 | 2.5 |
| Extreme (30C) | 707.5 | -7.7 | -0.010912 | 2.5 |
| Extreme (10C) | 707.5 | -8.2 | -0.011590 | 2.5 |
| Extreme (0C) | 707.5 | 2.9 | 0.004100 | 2.5 |
| Extreme (-10C) | 707.5 | -5.2 | -0.007292 | 2.5 |
| Extreme (-20C) | 707.5 | -8.7 | -0.012302 | 2.5 |
| Extreme (-30C) | 707.5 | -10.2 | -0.014350 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.6 LTE BAND 17

**Band 17 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 710.0 | 10.1 | 0.014194 | 2.5 |
| 3.85 | 710.0 | 9.3 | 0.013034 | 2.5 |
| 4.43 | 710.0 | 8.2 | 0.011532 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 710.0 | 9.8 | 0.013768 | 2.5 |
| Extreme (50C) | 710.0 | 8.5 | 0.012024 | 2.5 |
| Extreme (40C) | 710.0 | 8.6 | 0.012077 | 2.5 |
| Extreme (30C) | 710.0 | 9.4 | 0.013222 | 2.5 |
| Extreme (10C) | 710.0 | 8.8 | 0.012330 | 2.5 |
| Extreme (0C) | 710.0 | 7.9 | 0.011175 | 2.5 |
| Extreme (-10C) | 710.0 | 9.0 | 0.012745 | 2.5 |
| Extreme (-20C) | 710.0 | 8.9 | 0.012516 | 2.5 |
| Extreme (-30C) | 710.0 | 7.6 | 0.010731 | 2.5 |

**Band 17 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 710.0 | 10.1 | 0.014253 | 2.5 |
| 3.85 | 710.0 | 9.2 | 0.012946 | 2.5 |
| 4.43 | 710.0 | 8.4 | 0.011836 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 710.0 | 9.6 | 0.013542 | 2.5 |
| Extreme (50C) | 710.0 | 9.2 | 0.012952 | 2.5 |
| Extreme (40C) | 710.0 | 8.4 | 0.011801 | 2.5 |
| Extreme (30C) | 710.0 | 8.5 | 0.011971 | 2.5 |
| Extreme (10C) | 710.0 | 8.2 | 0.011550 | 2.5 |
| Extreme (0C) | 710.0 | 8.4 | 0.011821 | 2.5 |
| Extreme (-10C) | 710.0 | 9.0 | 0.012646 | 2.5 |
| Extreme (-20C) | 710.0 | 8.8 | 0.012332 | 2.5 |
| Extreme (-30C) | 710.0 | 8.6 | 0.012176 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.7 LTE BAND 25

**QPSK, (20MHz BANDWIDTH)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 1882.5 | 6 | 0.003187 | 2.5 |
| 3.85 | 1882.5 | 4 | 0.002125 | 2.5 |
| 4.43 | 1882.5 | 5 | 0.002656 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 1882.5 | 4.9 | 0.002581 | 2.5 |
| Extreme (50C) | 1882.5 | 9.2 | 0.004866 | 2.5 |
| Extreme (40C) | 1882.5 | 6.1 | 0.003242 | 2.5 |
| Extreme (30C) | 1882.5 | 6.7 | 0.003555 | 2.5 |
| Extreme (10C) | 1882.5 | 5.3 | 0.002838 | 2.5 |
| Extreme (0C) | 1882.5 | 8.4 | 0.004472 | 2.5 |
| Extreme (-10C) | 1882.5 | 1.7 | 0.000897 | 2.5 |
| Extreme (-20C) | 1882.5 | 2.3 | 0.001247 | 2.5 |
| Extreme (-30C) | 1882.5 | 6.6 | 0.003523 | 2.5 |

**16QAM, (20MHz BANDWIDTH)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 1882.5 | 9.6 | 0.005119 | 2.5 |
| 3.85 | 1882.5 | 7.3 | 0.003882 | 2.5 |
| 4.43 | 1882.5 | 5.0 | 0.002659 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 1882.5 | 7.0 | 0.003705 | 2.5 |
| Extreme (50C) | 1882.5 | 5.7 | 0.003023 | 2.5 |
| Extreme (40C) | 1882.5 | 8.3 | 0.004420 | 2.5 |
| Extreme (30C) | 1882.5 | 1.4 | 0.000767 | 2.5 |
| Extreme (10C) | 1882.5 | 2.6 | 0.001396 | 2.5 |
| Extreme (0C) | 1882.5 | 6.6 | 0.003532 | 2.5 |
| Extreme (-10C) | 1882.5 | 5.6 | 0.002988 | 2.5 |
| Extreme (-20C) | 1882.5 | 7.1 | 0.003761 | 2.5 |
| Extreme (-30C) | 1882.5 | 6.2 | 0.003288 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.8 LTE BAND 26 A

**Band 26A QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH) | | | | |
| 3.27 | 819 | 8.2 | 0.010019 | 2.5 |
| 3.85 | 819 | 5.7 | 0.006914 | 2.5 |
| 4.43 | 819 | 6.7 | 0.008208 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH) | | | | |
| Normal (25C) | 819 | 8.7 | 0.010659 | 2.5 |
| Extreme (50C) | 819 | 1.7 | 0.002027 | 2.5 |
| Extreme (40C) | 819 | 2.6 | 0.003157 | 2.5 |
| Extreme (30C) | 819 | 6.5 | 0.007900 | 2.5 |
| Extreme (10C) | 819 | 5.8 | 0.007140 | 2.5 |
| Extreme (0C) | 819 | 6.5 | 0.007965 | 2.5 |
| Extreme (-10C) | 819 | 9.0 | 0.010950 | 2.5 |
| Extreme (-20C) | 819 | 6.7 | 0.008140 | 2.5 |
| Extreme (-30C) | 819 | 4.6 | 0.005650 | 2.5 |

**Band 26A 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH) | | | | |
| 3.27 | 819 | 2.5 | 0.003076 | 2.5 |
| 3.85 | 819 | 6.8 | 0.008291 | 2.5 |
| 4.43 | 819 | 5.4 | 0.006540 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH) | | | | |
| Normal (25C) | 819 | 7.0 | 0.008538 | 2.5 |
| Extreme (50C) | 819 | 8.5 | 0.010364 | 2.5 |
| Extreme (40C) | 819 | 6.2 | 0.007520 | 2.5 |
| Extreme (30C) | 819 | 4.6 | 0.005622 | 2.5 |
| Extreme (10C) | 819 | 6.3 | 0.007722 | 2.5 |
| Extreme (0C) | 819 | 5.3 | 0.006487 | 2.5 |
| Extreme (-10C) | 819 | 8.8 | 0.010710 | 2.5 |
| Extreme (-20C) | 819 | 6.8 | 0.008290 | 2.5 |
| Extreme (-30C) | 819 | 7.6 | 0.009328 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.9 LTE BAND 26 B

**Band 26A QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 10MHz | | | | |
| 3.27 | 836.5 | 8.2 | 0.009779 | 2.5 |
| 3.85 | 836.5 | 6.7 | 0.008055 | 2.5 |
| 4.43 | 836.5 | 8.3 | 0.009883 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 10MHz | | | | |
| Normal (25C) | 836.5 | 10.9 | 0.012992 | 2.5 |
| Extreme (50C) | 836.5 | 9.0 | 0.010785 | 2.5 |
| Extreme (40C) | 836.5 | 6.6 | 0.007883 | 2.5 |
| Extreme (30C) | 836.5 | 8.6 | 0.010239 | 2.5 |
| Extreme (10C) | 836.5 | 7.7 | 0.009174 | 2.5 |
| Extreme (0C) | 836.5 | 9.1 | 0.010857 | 2.5 |
| Extreme (-10C) | 836.5 | 1.4 | 0.001723 | 2.5 |
| Extreme (-20C) | 836.5 | 8.7 | 0.010349 | 2.5 |
| Extreme (-30C) | 836.5 | 7.1 | 0.008518 | 2.5 |

**Band 26A 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 10MHz | | | | |
| 3.27 | 836.5 | 9.6 | 0.011422 | 2.5 |
| 3.85 | 836.5 | 11.6 | 0.013918 | 2.5 |
| 4.43 | 836.5 | 10.1 | 0.012022 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 10MHz | | | | |
| Normal (25C) | 836.5 | 6.6 | 0.007863 | 2.5 |
| Extreme (50C) | 836.5 | 8.2 | 0.009825 | 2.5 |
| Extreme (40C) | 836.5 | 7.8 | 0.009291 | 2.5 |
| Extreme (30C) | 836.5 | 7.7 | 0.009231 | 2.5 |
| Extreme (10C) | 836.5 | 6.1 | 0.007236 | 2.5 |
| Extreme (0C) | 836.5 | 5.0 | 0.006034 | 2.5 |
| Extreme (-10C) | 836.5 | 5.8 | 0.006976 | 2.5 |
| Extreme (-20C) | 836.5 | 3.3 | 0.011237 | 2.5 |
| Extreme (-30C) | 836.5 | 8.0 | 0.007292 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.10 LTE BAND 38

**Band 38 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 2595 | 8.6 | 0.003317 | 2.5 |
| 3.85 | 2595 | 6.6 | 0.002550 | 2.5 |
| 4.43 | 2595 | 7.0 | 0.002709 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 2595 | 7.4 | 0.002850 | 2.5 |
| Extreme (50C) | 2595 | 5.2 | 0.002015 | 2.5 |
| Extreme (40C) | 2595 | 5.4 | 0.002074 | 2.5 |
| Extreme (30C) | 2595 | 4.3 | 0.001675 | 2.5 |
| Extreme (10C) | 2595 | 6.1 | 0.002363 | 2.5 |
| Extreme (0C) | 2595 | 4.5 | 0.001739 | 2.5 |
| Extreme (-10C) | 2595 | 9.8 | 0.003769 | 2.5 |
| Extreme (-20C) | 2595 | 10.3 | 0.003981 | 2.5 |
| Extreme (-30C) | 2595 | 6.7 | 0.002568 | 2.5 |

**Band 38 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 2595 | 8.9 | 0.003415 | 2.5 |
| 3.85 | 2595 | 6.5 | 0.002506 | 2.5 |
| 4.43 | 2595 | 7.0 | 0.002697 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 2595 | 7.8 | 0.003008 | 2.5 |
| Extreme (50C) | 2595 | 5.1 | 0.001952 | 2.5 |
| Extreme (40C) | 2595 | 5.4 | 0.002084 | 2.5 |
| Extreme (30C) | 2595 | 5.1 | 0.001950 | 2.5 |
| Extreme (10C) | 2595 | 6.4 | 0.002462 | 2.5 |
| Extreme (0C) | 2595 | 5.1 | 0.001972 | 2.5 |
| Extreme (-10C) | 2595 | 9.8 | 0.003759 | 2.5 |
| Extreme (-20C) | 2595 | 10.6 | 0.004099 | 2.5 |
| Extreme (-30C) | 2595 | 6.0 | 0.002320 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.11 LTE BAND 41

**Band 41 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 2595 | 9.0 | 0.003457 | 2.5 |
| 3.85 | 2595 | 6.9 | 0.002642 | 2.5 |
| 4.43 | 2595 | 7.8 | 0.003006 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 2595 | 8.0 | 0.003069 | 2.5 |
| Extreme (50C) | 2595 | 4.5 | 0.001754 | 2.5 |
| Extreme (40C) | 2595 | 5.6 | 0.002149 | 2.5 |
| Extreme (30C) | 2595 | 5.1 | 0.001970 | 2.5 |
| Extreme (10C) | 2595 | 6.9 | 0.002661 | 2.5 |
| Extreme (0C) | 2595 | 4.8 | 0.001853 | 2.5 |
| Extreme (-10C) | 2595 | 9.6 | 0.003685 | 2.5 |
| Extreme (-20C) | 2595 | 10.7 | 0.004139 | 2.5 |
| Extreme (-30C) | 2595 | 6.3 | 0.002430 | 2.5 |

**Band 41 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| 3.27 | 2595 | 8.5 | 0.003294 | 2.5 |
| 3.85 | 2595 | 6.8 | 0.002640 | 2.5 |
| 4.43 | 2595 | 6.2 | 0.002408 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| Normal (25C) | 2595 | 7.5 | 0.002878 | 2.5 |
| Extreme (50C) | 2595 | 5.0 | 0.001941 | 2.5 |
| Extreme (40C) | 2595 | 5.6 | 0.002166 | 2.5 |
| Extreme (30C) | 2595 | 4.4 | 0.001702 | 2.5 |
| Extreme (10C) | 2595 | 6.1 | 0.002363 | 2.5 |
| Extreme (0C) | 2595 | 4.7 | 0.001818 | 2.5 |
| Extreme (-10C) | 2595 | 9.3 | 0.003568 | 2.5 |
| Extreme (-20C) | 2595 | 11.2 | 0.004323 | 2.5 |
| Extreme (-30C) | 2595 | 6.3 | 0.002447 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

## 10.12 LTE BAND 66

**QPSK, (20MHz BANDWIDTH)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH) | | | | |
| 3.27 | 1745 | 12.5 | 0.00716 | 2.5 |
| 3.85 | 1745 | 14.2 | 0.00812 | 2.5 |
| 4.43 | 1745 | 13.5 | 0.00772 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH) | | | | |
| Normal (25C) | 1745 | 7.7 | 0.004412 | 2.5 |
| Extreme (50C) | 1745 | 5.1 | 0.002935 | 2.5 |
| Extreme (40C) | 1745 | 5.8 | 0.003298 | 2.5 |
| Extreme (30C) | 1745 | 4.3 | 0.002454 | 2.5 |
| Extreme (10C) | 1745 | 6.3 | 0.003613 | 2.5 |
| Extreme (0C) | 1745 | 4.9 | 0.002814 | 2.5 |
| Extreme (-10C) | 1745 | 9.3 | 0.005324 | 2.5 |
| Extreme (-20C) | 1745 | 10.8 | 0.006190 | 2.5 |
| Extreme (-30C) | 1745 | 6.2 | 0.003562 | 2.5 |

**16QAM, (20MHz BANDWIDTH)**

**Frequency error vs. Voltage**

| Voltage [Vdc] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| **BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)** | | | | |
| 3.27 | 1745 | 12.5 | 0.007150 | 2.5 |
| 3.85 | 1745 | 13.8 | 0.007904 | 2.5 |
| 4.43 | 1745 | 13.1 | 0.007493 | 2.5 |

**Frequency error vs. Temperature**

| Temperature [°C] | Frequency [MHz] | Frequency* Error[Hz] | Frequency Error[ppm] | Limit [ppm] |
|---|---|---|---|---|
| **BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)** | | | | |
| Normal (25C) | 1745 | 7.2 | 0.004132 | 2.5 |
| Extreme (50C) | 1745 | 5.1 | 0.002929 | 2.5 |
| Extreme (40C) | 1745 | 5.7 | 0.003246 | 2.5 |
| Extreme (30C) | 1745 | 5.2 | 0.002963 | 2.5 |
| Extreme (10C) | 1745 | 6.6 | 0.003799 | 2.5 |
| Extreme (0C) | 1745 | 4.4 | 0.002496 | 2.5 |
| Extreme (-10C) | 1745 | 9.1 | 0.005228 | 2.5 |
| Extreme (-20C) | 1745 | 10.6 | 0.006065 | 2.5 |
| Extreme (-30C) | 1745 | 6.4 | 0.003684 | 2.5 |

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

# 11. Peak-to-Average Ratio

## 11.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

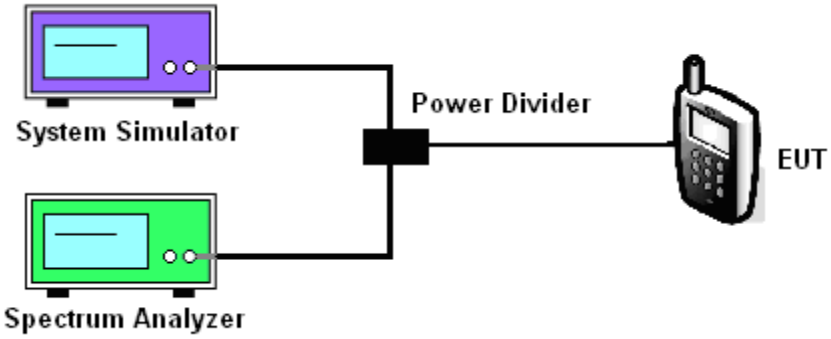
## 11.2 Measuring Instruments

See list of measuring instruments of this test report.

## 11.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. For LTE operating modes:
   a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
   b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.

11.4 Test Setup




**MODES TESTED**

LTE Band 2/4/5/7/12/17/25/26/38/41/66

Test data reference attachment.

**----END OF REPORT----**