# FCC TEST REPORT and IC TEST REPORT

**For**

**Tablet Computer**

**FCC Model: TP00064A**
**IC Model: TP00064AUC**

**Trade Name: Lenovo**

*Issued to*

**Compal Electronics Inc**
**No.581, Ruiguang Rd., Neihu District, Taipei, 11492 Taiwan**

*Issued by*

**Compliance Certification Services Inc.**
**No.11, Wugong 6th Rd., Wugu Dist.,**
**New Taipei City 24891, Taiwan. (R.O.C.)**
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**Issued Date: April 28, 2014**

Testing Laboratory
1309

## Revision History

| Rev. | | Issue Date | | Revisions | Effect Page | Revised By |
|---|---|---|---|---|---|---|
| 00 | | April 28, 2014 | | Initial Issue | ALL | Angel Cheng |

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# 1. TEST RESULT CERTIFICATION

| | |
|---|---|
| **Applicant:** | Compal Electronics Inc<br>No.581, Ruiguang Rd., Neihu District, Taipei, 11492 Taiwan |
| **Equipment Under Test:** | Tablet Computer |
| **Trade Name:** | Lenovo |
| **FCC Model:** | TP00064A |
| **IC Model:** | TP00064AUC |
| **Date of Test:** | March 23, 2014 |

| FCC PART 27, SUBPART C, L, FCC PART 2 | |
|---|---|
| **OPERATING BAND: 777 ~ 787 MHz** | |
| **Standard** | **TEST TYPE AND LIMIT** |
| 2.1046<br>27.50(B)(10)<br>&<br>RSS-130 Issue 1 October 2013 4.4 | Maximum Peak Output Power Limit:<br>max. 3 watts e.r.p peak power |
| 2.1055<br>27.54<br>&<br>RSS-130 Issue 1 October 2013 4.3 | Frequency Stability |
| 2.1049<br>27.53(g)<br>&<br>RSS-130 Issue 1 October 2013 4.3 | Occupied Bandwidth |
| 27.50(d)(5) | Peak to average ratio |
| 27.53(g) | Band Edge Measurements |
| 2.1051<br>27.53(g)<br>&<br>RSS-130 Issue 1 October 2013 4.6 | Conducted Spurious Emissions |
| 2.1053<br>27.53(g)<br>&<br>RSS-130 Issue 1 October 2013 4.6 | Radiated Spurious Emissions |

| OPERATING BAND: 1710~1755 MHz | |
|---|---|
| **Standard** | **TEST TYPE AND LIMIT** |
| 2.1046<br>27.50(d)(4)<br>&<br>RSS-139 Issue 2 February 2009 6.4 | Maximum Peak Output Power Limit:<br>max. 1 watts e.i.r.p peak power<br>max. 5 watts for Band 17 |
| 2.1055<br>27.54<br>&<br>RSS-139 Issue 2 February 2009 6.3 | Frequency Stability |
| 2.1049<br>27.53(h)<br>&<br>RSS-139 Issue 2 February 2009 2.3 | Occupied Bandwidth |
| 27.50(d)(5)<br>&<br>RSS-139 Issue 2 February 2009 6.4 | Peak to average ratio |
| 27.53(h) | Band Edge Measurements |
| 2.1051<br>27.53(h)<br>&<br>RSS-139 Issue 2 February 2009 6.5 | Conducted Spurious Emissions |
| 2.1053<br>27.53(h)<br>&<br>RSS-139 Issue 2 February 2009 6.5 6.6 | Radiated Spurious Emissions |

Note: 1. The test result judgment is decided by the limit of test standard
2. The information of measurement uncertainty is available upon the customer's request.

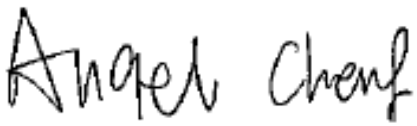
| Deviation from Applicable Standard |
| --- |
| None |

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

*Approved by*

Miller Lee
Section Manager
Compliance Certification Services Inc.

*Reviewed by*



Angel Cheng
Section Manager
Compliance Certification Services Inc.

# 2. EUT DESCRIPTION

| | | |
|---|---|---|
| **Product** | Tablet Computer | |
| **FCC Model Number** | TP00064A | |
| **IC Model Number** | TP00064AUC | |
| **Model Discrepancy** | N/A | |
| **Trade** | Lenovo | |
| **Received Date** | March 31, 2014 | |
| **Power Supply** | 1. Power Adapter<br>Lenovo / ADLX36NCt2B<br>I/P: 100-240V 1.5A 50-60Hz<br>O/P: 12V 3A<br>2. a). Trade: SIMPLO TECHNOLOGY (CHANGSHU) INC, SIMPLO TECHNOLOGY (CHONG QING) INC<br>Model: 45N1728<br>Rating: 8800mAh, 33Wh, 3.75V<br>b). Trade: SIMPLO TECHNOLOGY (CHANGSHU) INC, SIMPLO TECHNOLOGY (CHONG QING) INC<br>Model: 45N1732 (for NEC)<br>Rating: 8800mAh, 33Wh, 3.75V<br>c). Trade: LG Chem (Nanjing)<br>Model: 45N1730 (for NEC)<br>Rating: 8920mAh, 33Wh, 3.7V<br>d). Trade: LG Chem (Nanjing)<br>Model: 45N1726<br>Rating: 8920mAh, 33Wh, 3.7V | |
| **Modulation Technology** | LTE Band 13 | QPSK, 16QAM |
| | LTE Band 4 | QPSK, 16QAM |
| **Frequency Range** | LTE Band 13<br>Channel Bandwidth: 5MHz | 779.5MHz ~ 784.5MHz |
| | LTE Band 13<br>Channel Bandwidth: 10MHz | 782MHz |
| | LTE Band 4<br>Channel Bandwidth: 5MHz | 1712.5MHz ~1752.5MHz |
| | LTE Band 4<br>Channel Bandwidth: 10MHz | 1715.0MHz ~1750.0MHz |
| | LTE Band 4<br>Channel Bandwidth: 20MHz | 1710MHz ~1755MHz |

| | | |
|---|---|---|
| **Maximum ERP Power** | LTE Band 13<br>Channel Bandwidth: 5MHz | QPSK: 21.60dBm<br>16QAM: 22.31dBm |
| | LTE Band 13<br>Channel Bandwidth: 10MHz | QPSK : 20.84dBm<br>16QAM: 21.60dBm |
| **Maximum EIRP Power** | LTE Band 4<br>Channel Bandwidth: 5MHz | QPSK: 26.21dBm<br>16QAM: 27.39dBm |
| | LTE Band 4<br>Channel Bandwidth: 10MHz | QPSK: 24.99dBm<br>16QAM: 25.69dBm |
| | LTE Band 4<br>Channel Bandwidth: 20MHz | QPSK: 25.43dBm<br>16QAM: 25.28dBm |
| **Category** | LTE: 3 | |
| **Antenna Specification** | LTE Band 4: PIFA Antenna / Gain: -0.68dBi<br>LTE Band 13: PIFA Antenna / Gain: -2.90dBi | |

***Note:*** *1. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.*

# 3. TEST METHODOLOGY

## 3.1 DESCRIPTION OF TEST TYPE

The EUT (FCC model: TP00064A & IC model: TP00064AUC) had been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting mode was programmed.

**LTE Band 13: 777 MHz ~ 787 MHz**

Three channels had been tested for each channel bandwidth.

| Channel Bandwidth | 5MHz | | 10MHz | |
|---|---|---|---|---|
| | Channel | Frequency(MHz) | Channel | Frequency(MHz) |
| Low channel (L) | 23205 | 779.05 | N/A | N/A |
| Middle channel (M) | 23230 | 782.00 | 23230 | 782.00 |
| High channel (H) | 23255 | 784.50 | N/A | N/A |

**LTE Band 4: 1710MHz ~ 1755MHz**

Three channels had been tested for each channel bandwidth.

| Channel Bandwidth | 5MHz | | 10MHz | | 20MHz | |
|---|---|---|---|---|---|---|
| | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| Low channel (L) | 19975 | 1712.5 | 20000 | 1715.0 | 20050 | 1720.00 |
| Middle channel (M) | 20175 | 1732.5 | 20175 | 1732.5 | 20175 | 1732.50 |
| High channel (H) | 20375 | 1752.5 | 20350 | 1750.0 | 20300 | 1745.00 |

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

Test items for conducted and radiated emission were performed for report. Other testing data please refer to module (Brand: Sierra, Model: EM7345, FCC ID: N7NEM7345 and IC: 2417C-EM7345)

# 4. INSTRUMENT CALIBRATION

## 4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

## 4.2 MEASUREMENT EQUIPMENT USED

**Equipment Used for Emissions Measurement**

***Remark:*** *Each piece of equipment is scheduled for calibration once a year.*

| 3M Semi Anechoic Chamber | | | | |
|---|---|---|---|---|
| **Name of Equipment** | **Manufacturer** | **Model** | **Serial Number** | **Calibration Due** |
| Spectrum Analyzer | Agilent | E4446A | US42510268 | 11/05/2014 |
| EMI Test Receiver | R&S | ESCI | 100064 | 02/16/2015 |
| Pre-Amplifier | Mini-Circults | ZFL-1000LN | SF350700823 | 01/11/2015 |
| Bilog Antenna | Sunol Sciences | JB3 | A030105 | 02/16/2015 |
| Bilog Antenna | Sunol Sciences | JB3 | A030205 | 10/01/2014 |
| Horn Antenna | EMCO | 3117 | 00055165 | 02/16/2015 |
| Horn Antenna | EMCO | 3117 | 00055167 | 01/27/2015 |
| Horn Antenna | EMCO | 3116 | 26370 | 01/06/2015 |
| Loop Antenna | EMCO | 6502 | 8905/2356 | 06/12/2014 |
| Turn Table | CCS | CC-T-1F | N/A | N.C.R |
| Antenna Tower | CCS | CC-A-1F | N/A | N.C.R |
| Controller | CCS | CC-C-1F | N/A | N.C.R |
| Site NSA | CCS | N/A | N/A | 12/21/2014 |
| Test S/W | EZ-EMC (CCS-3A1RE) | | | |

## 4.3 MEASUREMENT UNCERTAINTY

| PARAMETER | UNCERTAINTY |
|---|---|
| 3M Semi Anechoic Chamber / 30M~200M | +/- 4.0138 |
| 3M Semi Anechoic Chamber / 200M~1000M | +/- 3.9483 |
| 3M Semi Anechoic Chamber / 1G~8G | +/- 2.5975 |
| 3M Semi Anechoic Chamber / 8G~18G | +/- 2.6112 |
| 3M Semi Anechoic Chamber / 18G~26G | +/- 2.7389 |
| 3M Semi Anechoic Chamber / 26G~40G | +/- 2.9683 |

***Remark**: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.*

# 5. FACILITIES AND ACCREDITATIONS

## 5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

☐ No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.
Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)
Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

☐ No.81-1, Lane 210, Bade 2nd Rd., Luchu Hsiang, Taoyuan Hsien 338, Taiwan
Tel: 886-3-324-0332 / Fax: 886-3-324-5235

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

## 5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

## 5.3 TABLE OF ACCREDITATIONS AND LISTINGS

| Country | Agency | Scope of Accreditation | Logo |
|---|---|---|---|
| USA | FCC | 3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements | FCC MRA: TW1039 |
| Taiwan | TAF | LP0002, RTTE01, FCC Method-47 CFR Part 15 Subpart C, D, E, RSS-210, RSS-310<br>IDA TS SRD, AS/NZS 4268, AS/NZS 4771, TS 12.1 & 12,2,<br>ETSI EN 300 440-1, ETSI EN 300 440-2, ETSI EN 300 328,<br>ETSI EN 300 220-1, ETSI EN 300 220-2, ETSI EN 301 893,<br>ETSI EN 301 489-1/3/7/17<br>FCC OET Bulletin 65 + Supplement C,<br>EN 50360, EN 50361, EN 50371, RSS 102, EN 50383, EN 50385,<br>EN 50392, IEC 62209, CNS 14958-1, CNS 14959<br>FCC Method –47 CFR Part 15 Subpart B<br>IEC / EN 61000-3-2, IEC / EN 61000-3-3,<br>IEC / EN 61000-4-2/3/4/5/6/8/11 | TAF Testing Laboratory 1309 |
| Canada | Industry Canada | 3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform | Canada<br>IC 2324G-1<br>IC 2324G-2 |

** No part of this report may be used to claim or imply product endorsement by A2LA or any agency of the US Government.*

# 6. SETUP OF EQUIPMENT UNDER TEST

## 6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

## 6.2 SUPPORT EQUIPMENT

| No. | Device Type | Brand | Model | Series No. | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|---|
| | N/A | | | | | | |

***Remark:***

1. *All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
2. *Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*

# 7. TEST PROCEDURE AND RESULT

## 7.1 OUTPUT POWER MEASUREMENT

## LIMITS

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz

band are limited to 1 watt EIRP.

Portable stations (hand-held devices) operating in the 698–746 MHz band are limited

to 3 watts ERP

## TEST PROCEDURES

**EIRP / ERP MEASUREMENT:**

1. The EUT was set up for the maximum power with LTE link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range). RWB and VBW is 10MHz for LTE.
2. E.I.R.P power measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
3. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step a. Record the power level of S.G d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn
4. E.R.P = E.I.R.P- 2.15 dB

**CONDUCTED POWER MEASUREMENT:**

1. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
2. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

# TEST RESULTS

## ERP POWER

## LTE Band 13

## Channel Bandwidth: 5MHz / QPSK

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 23205 | 777.9500 | V | 2.14 | 3.3 | 6.15 | 4.99 | 38.45 | -33.46 |
| | 777.8000 | H | 18.74 | 3.3 | 6.15 | 21.59 | 38.45 | -16.86 |
| 23230 | 783.5000 | V | 7.15 | 3.31 | 6.15 | 9.99 | 38.45 | -28.46 |
| | 783.6500 | H | 18.76 | 3.31 | 6.15 | **21.60** | 38.45 | -16.85 |
| 23255 | 785.6000 | V | 2.96 | 3.32 | 6.17 | 5.81 | 38.45 | -32.64 |
| | 785.6000 | H | 18.09 | 3.32 | 6.17 | 20.94 | 38.45 | -17.51 |

## Channel Bandwidth: 5MHz / 16QAM

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 23205 | 778.2500 | V | 3.85 | 3.3 | 6.14 | 6.69 | 38.45 | -31.76 |
| | 780.6500 | H | 19.07 | 3.3 | 6.12 | 21.89 | 38.45 | -16.56 |
| 23230 | 783.2000 | V | 7.92 | 3.31 | 6.15 | 10.76 | 38.45 | -27.69 |
| | 782.6000 | H | 19.48 | 3.31 | 6.14 | **22.31** | 38.45 | -16.14 |
| 23255 | 784.8500 | V | 7.23 | 3.32 | 6.16 | 10.07 | 38.45 | -28.38 |
| | 784.7000 | H | 18.86 | 3.32 | 6.16 | 21.70 | 38.45 | -16.75 |

***Remark:***

*1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).*
*2. Correction Factor (dB) = S.G Level + Gain of Substitution horn + TX cable loss.*
*3. The value in bold is the worst.*

## Channel Bandwidth: 10MHz / QPSK

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 23230 | 785.3000 | V | 6.04 | 3.32 | 6.17 | 8.89 | 38.45 | -29.56 |
| | 785.3000 | H | 17.99 | 3.32 | 6.17 | **20.84** | 38.45 | -17.61 |

## Channel Bandwidth: 10MHz / 16QAM

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 23230 | 785.6000 | V | 6.48 | 3.32 | 6.17 | 9.33 | 38.45 | -29.12 |
| | 784.7000 | H | 18.76 | 3.32 | 6.16 | **21.60** | 38.45 | -16.85 |

***Remark:***

*1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).*
*2. Correction Factor (dB) = S.G Level + Gain of Substitution horn + TX cable loss.*
*3. The value in bold is the worst.*

# EIRP POWER

## LTE Band 4

## Channel Bandwidth: 5MHz / QPSK

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 19975 | 1710.900 | V | 24.71 | 5.13 | 5.92 | 25.50 | 33.00 | -7.50 |
| | 1711.000 | H | 9.28 | 5.13 | 5.92 | 10.07 | 33.00 | -22.93 |
| 20175 | 1733.300 | V | 25.5 | 5.17 | 5.88 | **26.21** | 33.00 | -6.79 |
| | 1733.400 | H | 10.65 | 5.17 | 5.88 | 11.36 | 33.00 | -21.64 |
| 20375 | 1751.100 | V | 24.46 | 5.2 | 5.85 | 25.11 | 33.00 | -7.89 |
| | 1751.000 | H | 9.15 | 5.2 | 5.85 | 9.80 | 33.00 | -23.20 |

## Channel Bandwidth: 5MHz / 16QAM

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 19975 | 1711.000 | V | 25.54 | 5.13 | 5.92 | 26.33 | 33.00 | -6.67 |
| | 1713.800 | H | 10.06 | 5.13 | 5.92 | 10.85 | 33.00 | -22.15 |
| 20175 | 1733.000 | V | 26.68 | 5.17 | 5.88 | **27.39** | 33.00 | -5.61 |
| | 1733.500 | H | 11.38 | 5.17 | 5.88 | 12.09 | 33.00 | -20.91 |
| 20375 | 1751.300 | V | 25.57 | 5.2 | 5.85 | 26.22 | 33.00 | -6.78 |
| | 1751.200 | H | 9.74 | 5.2 | 5.85 | 10.39 | 33.00 | -22.61 |

## Channel Bandwidth: 10MHz / QPSK

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 20000 | 1711.600 | V | 22.88 | 5.13 | 5.92 | 23.67 | 33.00 | -9.33 |
| | 1711.600 | H | 9.29 | 5.13 | 5.92 | 10.08 | 33.00 | -22.92 |
| 20175 | 1735.200 | V | 24.28 | 5.17 | 5.88 | **24.99** | 33.00 | -8.01 |
| | 1735.200 | H | 9.96 | 5.17 | 5.88 | 10.67 | 33.00 | -22.33 |
| 20350 | 1746.400 | V | 23.3 | 5.19 | 5.86 | 23.97 | 33.00 | -9.03 |
| | 1746.300 | H | 9.52 | 5.19 | 5.86 | 10.19 | 33.00 | -22.81 |

## Channel Bandwidth: 10MHz / 16QAM

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 20000 | 1711.500 | V | 24.9 | 5.13 | 5.92 | **25.69** | 33.00 | -7.31 |
| | 1717.100 | H | 9.21 | 5.14 | 5.91 | 9.98 | 33.00 | -23.02 |
| 20175 | 1734.500 | V | 25.69 | 5.17 | 5.88 | 26.40 | 33.00 | -6.60 |
| | 1734.300 | H | 10.39 | 5.17 | 5.88 | 11.10 | 33.00 | -21.90 |
| 20350 | 1745.900 | V | 24.63 | 5.19 | 5.86 | 25.30 | 33.00 | -7.70 |
| | 1746.000 | H | 8.66 | 5.19 | 5.86 | 9.33 | 33.00 | -23.67 |

## Channel Bandwidth: 20MHz / QPSK

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 20050 | 1726.800 | V | 23.34 | 5.16 | 5.89 | 24.07 | 33.00 | -8.93 |
| | 1726.900 | H | 8.21 | 5.16 | 5.89 | 8.94 | 33.00 | -24.06 |
| 20175 | 1738.800 | V | 24.74 | 5.18 | 5.87 | **25.43** | 33.00 | -7.57 |
| | 1738.800 | H | 8.91 | 5.18 | 5.87 | 9.60 | 33.00 | -23.40 |
| 20300 | 1741.000 | V | 23.67 | 5.18 | 5.87 | 24.36 | 33.00 | -8.64 |
| | 1738.300 | H | 7.94 | 5.18 | 5.87 | 8.63 | 33.00 | -24.37 |

## Channel Bandwidth: 20MHz / 16QAM

| Channel | Frequency (MHz) | Antenna Pol. | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|
| 20050 | 1713.800 | V | 23.36 | 5.13 | 5.92 | 24.15 | 33.00 | -8.85 |
| | 1726.100 | H | 8.01 | 5.16 | 5.89 | 8.74 | 33.00 | -24.26 |
| 20175 | 1739.200 | V | 24.59 | 5.18 | 5.87 | **25.28** | 33.00 | -7.72 |
| | 1739.000 | H | 8.84 | 5.18 | 5.87 | 9.53 | 33.00 | -23.47 |
| 20300 | 1740.200 | V | 23.76 | 5.18 | 5.87 | 24.45 | 33.00 | -8.55 |
| | 1739.100 | H | 8.26 | 5.18 | 5.87 | 8.95 | 33.00 | -24.05 |

***Remark:***

*1. Output Power (dBm) = Raw Value (dBm) + Correction Factor (dB).*
*2. Correction Factor (dB) = S.G Level + Gain of Substitution horn + TX cable loss.*
*3. The value in bold is the worst.*

## 7.2 RADIATED EMISSION MEASUREMENT

## LIMITS

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. The limit of emission equal to –13dBm

So the limit of emission is the same absolute specified line.

| Limits | EQUIVALENT FIELD STRENGTH AT 3m (dBuV/m) (NOTE) |
|---|---|
| -13 | 82.22 |

**NOTE:** The following formula is used to convert the equipment radiated power to field strength.

E = [1000000√ (30P)] / 3 uV/m, where P is Watts

## TEST PROCEDURES

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the receiving antenna, which was mounted on antenna tower and its position at 0.8 m above the ground.
3. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading and recorded the value.
4. Repeat step 1 ~ 3 for horizontal polarization.

***NOTE:*** *The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.*

# TEST RESULTS

**Below 1GHz**

## LTE Band 13 / CHANNEL BANDWIDTH: 5MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 39.7000 | -58.64 | 0.72 | -12.6 | -71.96 | -13.00 | -58.96 | V |
| 66.8600 | -74.45 | 0.93 | -1.89 | -77.27 | -13.00 | -64.27 | V |
| 86.2600 | -76.37 | 1.08 | 0.62 | -76.83 | -13.00 | -63.83 | V |
| 132.8200 | -72.61 | 1.36 | -1.07 | -75.04 | -13.00 | -62.04 | V |
| 181.3200 | -75.23 | 1.61 | 3.66 | -73.18 | -13.00 | -60.18 | V |
| 256.0100 | -72.16 | 1.88 | 5.63 | -68.41 | -13.00 | -55.41 | V |
| | | | | | | | |
| 40.6700 | -56.8 | 0.73 | -11.85 | -69.38 | -13.00 | -56.38 | H |
| 123.1200 | -64.97 | 1.29 | -1.87 | -68.13 | -13.00 | -55.13 | H |
| 148.3400 | -67.68 | 1.42 | 0.53 | -68.57 | -13.00 | -55.57 | H |
| 241.4600 | -68.32 | 1.81 | 5.36 | -64.77 | -13.00 | -51.77 | H |
| 256.0100 | -67.61 | 1.88 | 5.63 | -63.86 | -13.00 | -50.86 | H |
| 554.7700 | -74.54 | 2.82 | 6.11 | -71.25 | -13.00 | -58.25 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 39.7000 | -59.48 | 0.72 | -12.6 | -72.80 | -13.00 | -59.80 | V |
| 123.1200 | -73.78 | 1.29 | -1.87 | -76.94 | -13.00 | -63.94 | V |
| 132.8200 | -72.62 | 1.36 | -1.07 | -75.05 | -13.00 | -62.05 | V |
| 176.4700 | -75.25 | 1.59 | 3.21 | -73.63 | -13.00 | -60.63 | V |
| 252.1300 | -72.63 | 1.85 | 5.68 | -68.80 | -13.00 | -55.80 | V |
| 382.1100 | -76.04 | 2.31 | 5.99 | -72.36 | -13.00 | -59.36 | V |
| | | | | | | | |
| 40.6700 | -57.24 | 0.73 | -11.85 | -69.82 | -13.00 | -56.82 | H |
| 123.1200 | -64.75 | 1.29 | -1.87 | -67.91 | -13.00 | -54.91 | H |
| 148.3400 | -69.08 | 1.42 | 0.53 | -69.97 | -13.00 | -56.97 | H |
| 244.3700 | -68.81 | 1.82 | 5.47 | -65.16 | -13.00 | -52.16 | H |
| 256.0100 | -68.32 | 1.88 | 5.63 | -64.57 | -13.00 | -51.57 | H |
| 354.9500 | -72.06 | 2.25 | 5.75 | -68.56 | -13.00 | -55.56 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 39.7000 | -59.35 | 0.72 | -12.6 | -72.67 | -13.00 | -59.67 | V |
| 132.8200 | -72.09 | 1.36 | -1.07 | -74.52 | -13.00 | -61.52 | V |
| 181.3200 | -75.52 | 1.61 | 3.66 | -73.47 | -13.00 | -60.47 | V |
| 252.1300 | -71.98 | 1.85 | 5.68 | -68.15 | -13.00 | -55.15 | V |
| 258.9200 | -72.79 | 1.9 | 5.6 | -69.09 | -13.00 | -56.09 | V |
| 399.5700 | -74.69 | 2.39 | 5.98 | -71.10 | -13.00 | -58.10 | V |
| | | | | | | | |
| 41.6400 | -57.98 | 0.74 | -11.1 | -69.82 | -13.00 | -56.82 | H |
| 86.2600 | -74.76 | 1.08 | 0.62 | -75.22 | -13.00 | -62.22 | H |
| 123.1200 | -64.97 | 1.29 | -1.87 | -68.13 | -13.00 | -55.13 | H |
| 132.8200 | -65.93 | 1.36 | -1.07 | -68.36 | -13.00 | -55.36 | H |
| 240.4900 | -68.3 | 1.81 | 5.34 | -64.77 | -13.00 | -51.77 | H |
| 256.0100 | -68.06 | 1.88 | 5.63 | -64.31 | -13.00 | -51.31 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 13 / CHANNEL BANDWIDTH: 10MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 39.7000 | -59.09 | 0.72 | -12.6 | -72.41 | -13.00 | -59.41 | V |
| 132.8200 | -72.51 | 1.36 | -1.07 | -74.94 | -13.00 | -61.94 | V |
| 181.3200 | -75.73 | 1.61 | 3.66 | -73.68 | -13.00 | -60.68 | V |
| 256.0100 | -72.01 | 1.88 | 5.63 | -68.26 | -13.00 | -55.26 | V |
| 388.9000 | -74.99 | 2.32 | 6 | -71.31 | -13.00 | -58.31 | V |
| 554.7700 | -81.62 | 2.82 | 6.11 | -78.33 | -13.00 | -65.33 | V |
| | | | | | | | |
| 41.6400 | -58.26 | 0.74 | -11.1 | -70.10 | -13.00 | -57.10 | H |
| 123.1200 | -64.97 | 1.29 | -1.87 | -68.13 | -13.00 | -55.13 | H |
| 135.7300 | -65.79 | 1.37 | -0.72 | -67.88 | -13.00 | -54.88 | H |
| 240.4900 | -67.83 | 1.81 | 5.34 | -64.30 | -13.00 | -51.30 | H |
| 252.1300 | -68.09 | 1.85 | 5.68 | -64.26 | -13.00 | -51.26 | H |
| 549.9200 | -75.53 | 2.81 | 6.18 | -72.16 | -13.00 | -59.16 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 13 / CHANNEL BANDWIDTH: 5MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 40.6700 | -60.2 | 0.73 | -11.85 | -72.78 | -13.00 | -59.78 | V |
| 86.2600 | -76.43 | 1.08 | 0.62 | -76.89 | -13.00 | -63.89 | V |
| 123.1200 | -73.94 | 1.29 | -1.87 | -77.10 | -13.00 | -64.10 | V |
| 176.4700 | -76.04 | 1.59 | 3.21 | -74.42 | -13.00 | -61.42 | V |
| 252.1300 | -72.63 | 1.85 | 5.68 | -68.80 | -13.00 | -55.80 | V |
| 385.9900 | -75.57 | 2.32 | 5.99 | -71.90 | -13.00 | -58.90 | V |
| | | | | | | | |
| 41.6400 | -56.57 | 0.74 | -11.1 | -68.41 | -13.00 | -55.41 | H |
| 123.1200 | -65.2 | 1.29 | -1.87 | -68.36 | -13.00 | -55.36 | H |
| 148.3400 | -67.47 | 1.42 | 0.53 | -68.36 | -13.00 | -55.36 | H |
| 252.1300 | -68.35 | 1.85 | 5.68 | -64.52 | -13.00 | -51.52 | H |
| 356.8900 | -72.57 | 2.26 | 5.73 | -69.10 | -13.00 | -56.10 | H |
| 477.1700 | -76.44 | 2.63 | 5.61 | -73.46 | -13.00 | -60.46 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 40.6700 | -60.05 | 0.73 | -11.85 | -72.63 | -13.00 | -59.63 | V |
| 132.8200 | -72.47 | 1.36 | -1.07 | -74.90 | -13.00 | -61.90 | V |
| 177.4400 | -74.79 | 1.6 | 3.31 | -73.08 | -13.00 | -60.08 | V |
| 256.0100 | -72.54 | 1.88 | 5.63 | -68.79 | -13.00 | -55.79 | V |
| 386.9600 | -75.36 | 2.32 | 6 | -71.68 | -13.00 | -58.68 | V |
| 600.3600 | -81.53 | 2.9 | 6.4 | -78.03 | -13.00 | -65.03 | V |
| | | | | | | | |
| 40.6700 | -56.74 | 0.73 | -11.85 | -69.32 | -13.00 | -56.32 | H |
| 123.1200 | -64.37 | 1.29 | -1.87 | -67.53 | -13.00 | -54.53 | H |
| 135.7300 | -66.16 | 1.37 | -0.72 | -68.25 | -13.00 | -55.25 | H |
| 252.1300 | -68.09 | 1.85 | 5.68 | -64.26 | -13.00 | -51.26 | H |
| 262.8000 | -70.01 | 1.93 | 5.46 | -66.48 | -13.00 | -53.48 | H |
| 354.9500 | -71.99 | 2.25 | 5.75 | -68.49 | -13.00 | -55.49 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 39.7000 | -59.35 | 0.72 | -12.6 | -72.67 | -13.00 | -59.67 | V |
| 66.8600 | -76.71 | 0.93 | -1.89 | -79.53 | -13.00 | -66.53 | V |
| 132.8200 | -73.23 | 1.36 | -1.07 | -75.66 | -13.00 | -62.66 | V |
| 184.2300 | -76.22 | 1.61 | 3.77 | -74.06 | -13.00 | -61.06 | V |
| 256.0100 | -72.35 | 1.88 | 5.63 | -68.60 | -13.00 | -55.60 | V |
| 399.5700 | -76.57 | 2.39 | 5.98 | -72.98 | -13.00 | -59.98 | V |
| | | | | | | | |
| 40.6700 | -56.8 | 0.73 | -11.85 | -69.38 | -13.00 | -56.38 | H |
| 118.2700 | -68.66 | 1.26 | -2.03 | -71.95 | -13.00 | -58.95 | H |
| 123.1200 | -65.01 | 1.29 | -1.87 | -68.17 | -13.00 | -55.17 | H |
| 134.7600 | -66.57 | 1.37 | -0.84 | -68.78 | -13.00 | -55.78 | H |
| 252.1300 | -68.41 | 1.85 | 5.68 | -64.58 | -13.00 | -51.58 | H |
| 258.9200 | -68.53 | 1.9 | 5.6 | -64.83 | -13.00 | -51.83 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 13 / CHANNEL BANDWIDTH: 10MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 40.6700 | -59.64 | 0.73 | -11.85 | -72.22 | -13.00 | -59.22 | V |
| 66.8600 | -74.57 | 0.93 | -1.89 | -77.39 | -13.00 | -64.39 | V |
| 135.7300 | -72.47 | 1.37 | -0.72 | -74.56 | -13.00 | -61.56 | V |
| 177.4400 | -75.77 | 1.6 | 3.31 | -74.06 | -13.00 | -61.06 | V |
| 256.0100 | -72.1 | 1.88 | 5.63 | -68.35 | -13.00 | -55.35 | V |
| 394.7200 | -75.66 | 2.35 | 5.99 | -72.02 | -13.00 | -59.02 | V |
| | | | | | | | |
| 41.6400 | -57.21 | 0.74 | -11.1 | -69.05 | -13.00 | -56.05 | H |
| 123.1200 | -64.77 | 1.29 | -1.87 | -67.93 | -13.00 | -54.93 | H |
| 244.3700 | -68.04 | 1.82 | 5.47 | -64.39 | -13.00 | -51.39 | H |
| 252.1300 | -67.71 | 1.85 | 5.68 | -63.88 | -13.00 | -50.88 | H |
| 356.8900 | -71.84 | 2.26 | 5.73 | -68.37 | -13.00 | -55.37 | H |
| 554.7700 | -75.49 | 2.82 | 6.11 | -72.20 | -13.00 | -59.20 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 5MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 110.5100 | -69.35 | 1.21 | -1.72 | -72.28 | -13.00 | -59.28 | V |
| 150.2800 | -70.34 | 1.43 | 0.71 | -71.06 | -13.00 | -58.06 | V |
| 213.3300 | -74.29 | 1.71 | 5.4 | -70.60 | -13.00 | -57.60 | V |
| 250.1900 | -67.94 | 1.84 | 5.68 | -64.10 | -13.00 | -51.10 | V |
| 347.1900 | -79.67 | 2.21 | 5.8 | -76.08 | -13.00 | -63.08 | V |
| 391.8100 | -75.53 | 2.32 | 6 | -71.85 | -13.00 | -58.85 | V |
| | | | | | | | |
| 46.4900 | -60.8 | 0.78 | -7.34 | -68.92 | -13.00 | -55.92 | H |
| 123.1200 | -64.3 | 1.29 | -1.87 | -67.46 | -13.00 | -54.46 | H |
| 250.1900 | -63.6 | 1.84 | 5.68 | -59.76 | -13.00 | -46.76 | H |
| 390.8400 | -71.03 | 2.32 | 6 | -67.35 | -13.00 | -54.35 | H |
| 552.8300 | -76.35 | 2.82 | 6.14 | -73.03 | -13.00 | -60.03 | H |
| 700.2700 | -77.62 | 3.11 | 6.39 | -74.34 | -13.00 | -61.34 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.81 | 1.29 | -1.87 | -70.97 | -13.00 | -57.97 | V |
| 242.4300 | -67.89 | 1.81 | 5.39 | -64.31 | -13.00 | -51.31 | V |
| 412.1800 | -77.06 | 2.45 | 5.89 | -73.62 | -13.00 | -60.62 | V |
| 573.2000 | -81.27 | 2.88 | 6.08 | -78.07 | -13.00 | -65.07 | V |
| 666.3200 | -81.18 | 3.07 | 6.3 | -77.95 | -13.00 | -64.95 | V |
| 771.0800 | -80.93 | 3.27 | 6.35 | -77.85 | -13.00 | -64.85 | V |
| | | | | | | | |
| 46.4900 | -60.52 | 0.78 | -7.34 | -68.64 | -13.00 | -55.64 | H |
| 123.1200 | -64.42 | 1.29 | -1.87 | -67.58 | -13.00 | -54.58 | H |
| 242.4300 | -63.19 | 1.81 | 5.39 | -59.61 | -13.00 | -46.61 | H |
| 352.0400 | -73.66 | 2.24 | 5.78 | -70.12 | -13.00 | -57.12 | H |
| 387.9300 | -71.67 | 2.32 | 6 | -67.99 | -13.00 | -54.99 | H |
| 554.7700 | -75.4 | 2.82 | 6.11 | -72.11 | -13.00 | -59.11 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the ackground noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -68.14 | 1.29 | -1.87 | -71.30 | -13.00 | -58.30 | V |
| 248.2500 | -68.8 | 1.83 | 5.61 | -65.02 | -13.00 | -52.02 | V |
| 356.8900 | -78.9 | 2.26 | 5.73 | -75.43 | -13.00 | -62.43 | V |
| 402.4800 | -76.35 | 2.41 | 5.97 | -72.79 | -13.00 | -59.79 | V |
| 472.3200 | -82.57 | 2.62 | 5.72 | -79.47 | -13.00 | -66.47 | V |
| 554.7700 | -80.14 | 2.82 | 6.11 | -76.85 | -13.00 | -63.85 | V |
| | | | | | | | |
| 123.1200 | -65.04 | 1.29 | -1.87 | -68.20 | -13.00 | -55.20 | H |
| 188.1100 | -74.79 | 1.62 | 3.92 | -72.49 | -13.00 | -59.49 | H |
| 244.3700 | -64.24 | 1.82 | 5.47 | -60.59 | -13.00 | -47.59 | H |
| 395.6900 | -70.88 | 2.36 | 5.99 | -67.25 | -13.00 | -54.25 | H |
| 525.6700 | -77.5 | 2.73 | 6.04 | -74.19 | -13.00 | -61.19 | H |
| 637.2200 | -77.75 | 3 | 6.15 | -74.60 | -13.00 | -61.60 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 10MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 41.6400 | -59.74 | 0.74 | -11.1 | -71.58 | -13.00 | -58.58 | V |
| 123.1200 | -67.77 | 1.29 | -1.87 | -70.93 | -13.00 | -57.93 | V |
| 152.2200 | -72.36 | 1.44 | 0.87 | -72.93 | -13.00 | -59.93 | V |
| 241.4600 | -68.65 | 1.81 | 5.36 | -65.10 | -13.00 | -52.10 | V |
| 412.1800 | -76.7 | 2.45 | 5.89 | -73.26 | -13.00 | -60.26 | V |
| 554.7700 | -80.79 | 2.82 | 6.11 | -77.50 | -13.00 | -64.50 | V |
| | | | | | | | |
| 43.5800 | -59.55 | 0.75 | -9.59 | -69.89 | -13.00 | -56.89 | H |
| 123.1200 | -65.38 | 1.29 | -1.87 | -68.54 | -13.00 | -55.54 | H |
| 248.2500 | -64.21 | 1.83 | 5.61 | -60.43 | -13.00 | -47.43 | H |
| 390.8400 | -71.44 | 2.32 | 6 | -67.76 | -13.00 | -54.76 | H |
| 554.7700 | -75.88 | 2.82 | 6.11 | -72.59 | -13.00 | -59.59 | H |
| 737.1300 | -75.94 | 3.2 | 6.2 | -72.94 | -13.00 | -59.94 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.52 | 1.29 | -1.87 | -70.68 | -13.00 | -57.68 | V |
| 151.2500 | -73.12 | 1.43 | 0.8 | -73.75 | -13.00 | -60.75 | V |
| 245.3400 | -69.02 | 1.82 | 5.5 | -65.34 | -13.00 | -52.34 | V |
| 401.5100 | -77.06 | 2.4 | 5.98 | -73.48 | -13.00 | -60.48 | V |
| 554.7700 | -81.27 | 2.82 | 6.11 | -77.98 | -13.00 | -64.98 | V |
| 688.6300 | -81.25 | 3.13 | 6.5 | -77.88 | -13.00 | -64.88 | V |
| | | | | | | | |
| 47.4600 | -61.04 | 0.78 | -6.58 | -68.40 | -13.00 | -55.40 | H |
| 123.1200 | -64.04 | 1.29 | -1.87 | -67.20 | -13.00 | -54.20 | H |
| 245.3400 | -63.6 | 1.82 | 5.5 | -59.92 | -13.00 | -46.92 | H |
| 341.3700 | -76.77 | 2.18 | 5.8 | -73.15 | -13.00 | -60.15 | H |
| 391.8100 | -70.8 | 2.32 | 6 | -67.12 | -13.00 | -54.12 | H |
| 554.7700 | -76.23 | 2.82 | 6.11 | -72.94 | -13.00 | -59.94 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.71 | 1.29 | -1.87 | -70.87 | -13.00 | -57.87 | V |
| 152.2200 | -72.61 | 1.44 | 0.87 | -73.18 | -13.00 | -60.18 | V |
| 247.2800 | -68.9 | 1.83 | 5.57 | -65.16 | -13.00 | -52.16 | V |
| 355.9200 | -78.5 | 2.25 | 5.74 | -75.01 | -13.00 | -62.01 | V |
| 402.4800 | -76.75 | 2.41 | 5.97 | -73.19 | -13.00 | -60.19 | V |
| 554.7700 | -80.73 | 2.82 | 6.11 | -77.44 | -13.00 | -64.44 | V |
| | | | | | | | |
| 47.4600 | -61.39 | 0.78 | -6.58 | -68.75 | -13.00 | -55.75 | H |
| 123.1200 | -64.37 | 1.29 | -1.87 | -67.53 | -13.00 | -54.53 | H |
| 185.2000 | -75.04 | 1.61 | 3.81 | -72.84 | -13.00 | -59.84 | H |
| 247.2800 | -63.83 | 1.83 | 5.57 | -60.09 | -13.00 | -47.09 | H |
| 391.8100 | -70.5 | 2.32 | 6 | -66.82 | -13.00 | -53.82 | H |
| 553.8000 | -76.39 | 2.82 | 6.13 | -73.08 | -13.00 | -60.08 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 20MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 60% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.83 | 1.29 | -1.87 | -70.99 | -13.00 | -57.99 | V |
| 244.3700 | -69.27 | 1.82 | 5.47 | -65.62 | -13.00 | -52.62 | V |
| 351.0700 | -80.98 | 2.23 | 5.79 | -77.42 | -13.00 | -64.42 | V |
| 359.8000 | -78.25 | 2.27 | 5.7 | -74.82 | -13.00 | -61.82 | V |
| 410.2400 | -76.72 | 2.45 | 5.9 | -73.27 | -13.00 | -60.27 | V |
| 554.7700 | -80.95 | 2.82 | 6.11 | -77.66 | -13.00 | -64.66 | V |
| | | | | | | | |
| 123.1200 | -64.15 | 1.29 | -1.87 | -67.31 | -13.00 | -54.31 | H |
| 247.2800 | -63.97 | 1.83 | 5.57 | -60.23 | -13.00 | -47.23 | H |
| 390.8400 | -70.81 | 2.32 | 6 | -67.13 | -13.00 | -54.13 | H |
| 472.3200 | -77.29 | 2.62 | 5.72 | -74.19 | -13.00 | -61.19 | H |
| 551.8600 | -76.76 | 2.81 | 6.16 | -73.41 | -13.00 | -60.41 | H |
| 677.9600 | -77.94 | 3.09 | 6.46 | -74.57 | -13.00 | -61.57 | H |

***Remark:***

3. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 60% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.76 | 1.29 | -1.87 | -70.92 | -13.00 | -57.92 | V |
| 244.3700 | -69.19 | 1.82 | 5.47 | -65.54 | -13.00 | -52.54 | V |
| 356.8900 | -79.03 | 2.26 | 5.73 | -75.56 | -13.00 | -62.56 | V |
| 409.2700 | -77.9 | 2.44 | 5.91 | -74.43 | -13.00 | -61.43 | V |
| 554.7700 | -81.61 | 2.82 | 6.11 | -78.32 | -13.00 | -65.32 | V |
| N/A | | | | | | | |
| | | | | | | | |
| 123.1200 | -64.77 | 1.29 | -1.87 | -67.93 | -13.00 | -54.93 | H |
| 251.1600 | -64.44 | 1.84 | 5.69 | -60.59 | -13.00 | -47.59 | H |
| 394.7200 | -71.54 | 2.35 | 5.99 | -67.90 | -13.00 | -54.90 | H |
| 585.8100 | -76 | 2.89 | 6.11 | -72.78 | -13.00 | -59.78 | H |
| 726.4600 | -77.45 | 3.18 | 6.43 | -74.20 | -13.00 | -61.20 | H |
| 922.4000 | -75.79 | 3.58 | 6.55 | -72.82 | -13.00 | -59.82 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 60% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.6 | 1.29 | -1.87 | -70.76 | -13.00 | -57.76 | V |
| 248.2500 | -69.55 | 1.83 | 5.61 | -65.77 | -13.00 | -52.77 | V |
| 402.4800 | -76.7 | 2.41 | 5.97 | -73.14 | -13.00 | -60.14 | V |
| 554.7700 | -79.76 | 2.82 | 6.11 | -76.47 | -13.00 | -63.47 | V |
| 772.0500 | -81.03 | 3.28 | 6.32 | -77.99 | -13.00 | -64.99 | V |
| 923.3700 | -78.48 | 3.59 | 6.53 | -75.54 | -13.00 | -62.54 | V |
| | | | | | | | |
| 123.1200 | -65.06 | 1.29 | -1.87 | -68.22 | -13.00 | -55.22 | H |
| 253.1000 | -64.4 | 1.86 | 5.67 | -60.59 | -13.00 | -47.59 | H |
| 393.7500 | -70.14 | 2.34 | 5.99 | -66.49 | -13.00 | -53.49 | H |
| 554.7700 | -74.86 | 2.82 | 6.11 | -71.57 | -13.00 | -58.57 | H |
| 700.2700 | -78.02 | 3.11 | 6.39 | -74.74 | -13.00 | -61.74 | H |
| 771.0800 | -76.55 | 3.27 | 6.35 | -73.47 | -13.00 | -60.47 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 5MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -68.27 | 1.29 | -1.87 | -71.43 | -13.00 | -58.43 | V |
| 150.2800 | -71.27 | 1.43 | 0.71 | -71.99 | -13.00 | -58.99 | V |
| 215.2700 | -73.64 | 1.73 | 5.37 | -70.00 | -13.00 | -57.00 | V |
| 245.3400 | -68.39 | 1.82 | 5.5 | -64.71 | -13.00 | -51.71 | V |
| 354.9500 | -78.42 | 2.25 | 5.75 | -74.92 | -13.00 | -61.92 | V |
| 402.4800 | -76.68 | 2.41 | 5.97 | -73.12 | -13.00 | -60.12 | V |
| | | | | | | | |
| 46.4900 | -60.11 | 0.78 | -7.34 | -68.23 | -13.00 | -55.23 | H |
| 123.1200 | -64.97 | 1.29 | -1.87 | -68.13 | -13.00 | -55.13 | H |
| 230.7900 | -69.95 | 1.8 | 5.4 | -66.35 | -13.00 | -53.35 | H |
| 250.1900 | -64.36 | 1.84 | 5.68 | -60.52 | -13.00 | -47.52 | H |
| 395.6900 | -71.07 | 2.36 | 5.99 | -67.44 | -13.00 | -54.44 | H |
| 554.7700 | -73.95 | 2.82 | 6.11 | -70.66 | -13.00 | -57.66 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.75 | 1.29 | -1.87 | -70.91 | -13.00 | -57.91 | V |
| 247.2800 | -68.69 | 1.83 | 5.57 | -64.95 | -13.00 | -51.95 | V |
| 402.4800 | -76.29 | 2.41 | 5.97 | -72.73 | -13.00 | -59.73 | V |
| 554.7700 | -81.22 | 2.82 | 6.11 | -77.93 | -13.00 | -64.93 | V |
| 724.5200 | -80.83 | 3.17 | 6.46 | -77.54 | -13.00 | -64.54 | V |
| 817.6400 | -80.25 | 3.38 | 6.2 | -77.43 | -13.00 | -64.43 | V |
| | | | | | | | |
| 123.1200 | -64.05 | 1.29 | -1.87 | -67.21 | -13.00 | -54.21 | H |
| 244.3700 | -63.93 | 1.82 | 5.47 | -60.28 | -13.00 | -47.28 | H |
| 387.9300 | -71.1 | 2.32 | 6 | -67.42 | -13.00 | -54.42 | H |
| 554.7700 | -75.36 | 2.82 | 6.11 | -72.07 | -13.00 | -59.07 | H |
| 600.3600 | -78.06 | 2.9 | 6.4 | -74.56 | -13.00 | -61.56 | H |
| 700.2700 | -77.91 | 3.11 | 6.39 | -74.63 | -13.00 | -61.63 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the ackground noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.78 | 1.29 | -1.87 | -70.94 | -13.00 | -57.94 | V |
| 153.1900 | -72.36 | 1.44 | 0.94 | -72.86 | -13.00 | -59.86 | V |
| 218.1800 | -73.98 | 1.75 | 5.33 | -70.40 | -13.00 | -57.40 | V |
| 244.3700 | -68.61 | 1.82 | 5.47 | -64.96 | -13.00 | -51.96 | V |
| 403.4500 | -76.43 | 2.41 | 5.96 | -72.88 | -13.00 | -59.88 | V |
| 549.9200 | -80.88 | 2.81 | 6.18 | -77.51 | -13.00 | -64.51 | V |
| | | | | | | | |
| 123.1200 | -65.63 | 1.29 | -1.87 | -68.79 | -13.00 | -55.79 | H |
| 153.1900 | -71.33 | 1.44 | 0.94 | -71.83 | -13.00 | -58.83 | H |
| 245.3400 | -64.59 | 1.82 | 5.5 | -60.91 | -13.00 | -47.91 | H |
| 381.1400 | -70.96 | 2.31 | 5.98 | -67.29 | -13.00 | -54.29 | H |
| 554.7700 | -75.26 | 2.82 | 6.11 | -71.97 | -13.00 | -58.97 | H |
| 711.9100 | -71.54 | 3.15 | 6.35 | -68.34 | -13.00 | -55.34 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 10MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 117.3000 | -70.61 | 1.26 | -1.99 | -73.86 | -13.00 | -60.86 | V |
| 153.1900 | -72.58 | 1.44 | 0.94 | -73.08 | -13.00 | -60.08 | V |
| 245.3400 | -68.61 | 1.82 | 5.5 | -64.93 | -13.00 | -51.93 | V |
| 355.9200 | -78.87 | 2.25 | 5.74 | -75.38 | -13.00 | -62.38 | V |
| 399.5700 | -76.76 | 2.39 | 5.98 | -73.17 | -13.00 | -60.17 | V |
| 562.5300 | -81.4 | 2.85 | 6.01 | -78.24 | -13.00 | -65.24 | V |
| | | | | | | | |
| 123.1200 | -65.12 | 1.29 | -1.87 | -68.28 | -13.00 | -55.28 | H |
| 253.1000 | -64.74 | 1.86 | 5.67 | -60.93 | -13.00 | -47.93 | H |
| 386.9600 | -71.21 | 2.32 | 6 | -67.53 | -13.00 | -54.53 | H |
| 412.1800 | -74.22 | 2.45 | 5.89 | -70.78 | -13.00 | -57.78 | H |
| 554.7700 | -75.86 | 2.82 | 6.11 | -72.57 | -13.00 | -59.57 | H |
| 700.2700 | -76.1 | 3.11 | 6.39 | -72.82 | -13.00 | -59.82 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.51 | 1.29 | -1.87 | -70.67 | -13.00 | -57.67 | V |
| 152.2200 | -72.43 | 1.44 | 0.87 | -73.00 | -13.00 | -60.00 | V |
| 254.0700 | -70.01 | 1.86 | 5.66 | -66.21 | -13.00 | -53.21 | V |
| 354.9500 | -77.1 | 2.25 | 5.75 | -73.60 | -13.00 | -60.60 | V |
| 401.5100 | -76.17 | 2.4 | 5.98 | -72.59 | -13.00 | -59.59 | V |
| 648.8600 | -79.37 | 3.03 | 6.26 | -76.14 | -13.00 | -63.14 | V |
| | | | | | | | |
| 45.5200 | -60.34 | 0.77 | -8.09 | -69.20 | -13.00 | -56.20 | H |
| 123.1200 | -64.69 | 1.29 | -1.87 | -67.85 | -13.00 | -54.85 | H |
| 215.2700 | -74.34 | 1.73 | 5.37 | -70.70 | -13.00 | -57.70 | H |
| 247.2800 | -64.06 | 1.83 | 5.57 | -60.32 | -13.00 | -47.32 | H |
| 394.7200 | -70.09 | 2.35 | 5.99 | -66.45 | -13.00 | -53.45 | H |
| 553.8000 | -76.59 | 2.82 | 6.13 | -73.28 | -13.00 | -60.28 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.78 | 1.29 | -1.87 | -70.94 | -13.00 | -57.94 | V |
| 217.2100 | -75.57 | 1.74 | 5.35 | -71.96 | -13.00 | -58.96 | V |
| 247.2800 | -69.44 | 1.83 | 5.57 | -65.70 | -13.00 | -52.70 | V |
| 358.8300 | -78.67 | 2.27 | 5.71 | -75.23 | -13.00 | -62.23 | V |
| 401.5100 | -76.7 | 2.4 | 5.98 | -73.12 | -13.00 | -60.12 | V |
| 554.7700 | -80.08 | 2.82 | 6.11 | -76.79 | -13.00 | -63.79 | V |
| | | | | | | | |
| 123.1200 | -64.18 | 1.29 | -1.87 | -67.34 | -13.00 | -54.34 | H |
| 153.1900 | -72.3 | 1.44 | 0.94 | -72.80 | -13.00 | -59.80 | H |
| 251.1600 | -64.93 | 1.84 | 5.69 | -61.08 | -13.00 | -48.08 | H |
| 389.8700 | -70.5 | 2.32 | 6 | -66.82 | -13.00 | -53.82 | H |
| 411.2100 | -73.71 | 2.45 | 5.9 | -70.26 | -13.00 | -57.26 | H |
| 554.7700 | -76.15 | 2.82 | 6.11 | -72.86 | -13.00 | -59.86 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 20MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 60% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -66.97 | 1.29 | -1.87 | -70.13 | -13.00 | -57.13 | V |
| 251.1600 | -68.85 | 1.84 | 5.69 | -65.00 | -13.00 | -52.00 | V |
| 358.8300 | -78.3 | 2.27 | 5.71 | -74.86 | -13.00 | -61.86 | V |
| 402.4800 | -76.94 | 2.41 | 5.97 | -73.38 | -13.00 | -60.38 | V |
| 554.7700 | -80.1 | 2.82 | 6.11 | -76.81 | -13.00 | -63.81 | V |
| 700.2700 | -80.26 | 3.11 | 6.39 | -76.98 | -13.00 | -63.98 | V |
| | | | | | | | |
| 123.1200 | -64.85 | 1.29 | -1.87 | -68.01 | -13.00 | -55.01 | H |
| 191.0200 | -75.27 | 1.62 | 3.89 | -73.00 | -13.00 | -60.00 | H |
| 248.2500 | -64.24 | 1.83 | 5.61 | -60.46 | -13.00 | -47.46 | H |
| 371.4400 | -73.24 | 2.3 | 5.84 | -69.70 | -13.00 | -56.70 | H |
| 395.6900 | -71.55 | 2.36 | 5.99 | -67.92 | -13.00 | -54.92 | H |
| 554.7700 | -75.55 | 2.82 | 6.11 | -72.26 | -13.00 | -59.26 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 60% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 152.2200 | -71.16 | 1.44 | 0.87 | -71.73 | -13.00 | -58.73 | V |
| 248.2500 | -69.27 | 1.83 | 5.61 | -65.49 | -13.00 | -52.49 | V |
| 353.9800 | -78.8 | 2.25 | 5.76 | -75.29 | -13.00 | -62.29 | V |
| 399.5700 | -76.9 | 2.39 | 5.98 | -73.31 | -13.00 | -60.31 | V |
| 554.7700 | -81.12 | 2.82 | 6.11 | -77.83 | -13.00 | -64.83 | V |
| 700.2700 | -81.6 | 3.11 | 6.39 | -78.32 | -13.00 | -65.32 | V |
| | | | | | | | |
| 117.3000 | -67.92 | 1.26 | -1.99 | -71.17 | -13.00 | -58.17 | H |
| 151.2500 | -73.56 | 1.43 | 0.8 | -74.19 | -13.00 | -61.19 | H |
| 245.3400 | -64.44 | 1.82 | 5.5 | -60.76 | -13.00 | -47.76 | H |
| 256.0100 | -64.87 | 1.88 | 5.63 | -61.12 | -13.00 | -48.12 | H |
| 392.7800 | -70.8 | 2.33 | 5.99 | -67.14 | -13.00 | -54.14 | H |
| 554.7700 | -74.59 | 2.82 | 6.11 | -71.30 | -13.00 | -58.30 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 60% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 123.1200 | -67.34 | 1.29 | -1.87 | -70.50 | -13.00 | -57.50 | V |
| 238.5500 | -72.13 | 1.81 | 5.35 | -68.59 | -13.00 | -55.59 | V |
| 248.2500 | -69.52 | 1.83 | 5.61 | -65.74 | -13.00 | -52.74 | V |
| 402.4800 | -77.14 | 2.41 | 5.97 | -73.58 | -13.00 | -60.58 | V |
| 554.7700 | -81.15 | 2.82 | 6.11 | -77.86 | -13.00 | -64.86 | V |
| 704.1500 | -81.35 | 3.13 | 6.35 | -78.13 | -13.00 | -65.13 | V |
| | | | | | | | |
| 123.1200 | -65.81 | 1.29 | -1.87 | -68.97 | -13.00 | -55.97 | H |
| 253.1000 | -64.15 | 1.86 | 5.67 | -60.34 | -13.00 | -47.34 | H |
| 400.5400 | -70.78 | 2.4 | 5.98 | -67.20 | -13.00 | -54.20 | H |
| 452.9200 | -76.74 | 2.59 | 5.77 | -73.56 | -13.00 | -60.56 | H |
| 547.9800 | -75.95 | 2.8 | 6.2 | -72.55 | -13.00 | -59.55 | H |
| 782.7200 | -76.79 | 3.31 | 6.14 | -73.96 | -13.00 | -60.96 | H |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

**Above 1GHz**

## LTE Band 13 / CHANNEL BANDWIDTH: 5MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 1560.000 | -45.36 | 4.93 | 6.19 | -44.10 | -13.00 | -31.10 | V |
| 2337.000 | -47.55 | 6.11 | 5.87 | -47.79 | -13.00 | -34.79 | V |
| 3121.000 | -51.51 | 7.19 | 7.76 | -50.94 | -13.00 | -37.94 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1553.000 | -45.85 | 4.92 | 6.2 | -44.57 | -13.00 | -31.57 | H |
| 2337.000 | -46.56 | 6.11 | 5.87 | -46.80 | -13.00 | -33.80 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 1567.000 | -46.11 | 4.94 | 6.18 | -44.87 | -13.00 | -31.87 | V |
| 2344.000 | -47.18 | 6.12 | 5.88 | -47.42 | -13.00 | -34.42 | V |
| 3128.000 | -51.49 | 7.2 | 7.78 | -50.91 | -13.00 | -37.91 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1567.000 | -46.22 | 4.94 | 6.18 | -44.98 | -13.00 | -31.98 | H |
| 2344.000 | -51.53 | 6.12 | 5.88 | -51.77 | -13.00 | -38.77 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 1567.000 | -47.25 | 4.94 | 6.18 | -46.01 | -13.00 | -33.01 | V |
| 2351.000 | -45.89 | 6.13 | 5.89 | -46.13 | -13.00 | -33.13 | V |
| 3142.000 | -52.17 | 7.21 | 7.83 | -51.55 | -13.00 | -38.55 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1567.000 | -46.55 | 4.94 | 6.18 | -45.31 | -13.00 | -32.31 | H |
| 2351.000 | -47.74 | 6.13 | 5.89 | -47.98 | -13.00 | -34.98 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 13 / CHANNEL BANDWIDTH: 10MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 1567.000 | -48.9 | 4.94 | 6.18 | -47.66 | -13.00 | -34.66 | V |
| 1966.000 | -47.97 | 5.63 | 5.46 | -48.14 | -13.00 | -35.14 | V |
| 2344.000 | -48.52 | 6.12 | 5.88 | -48.76 | -13.00 | -35.76 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1560.000 | -48.8 | 4.93 | 6.19 | -47.54 | -13.00 | -34.54 | H |
| 1966.000 | -49.14 | 5.63 | 5.46 | -49.31 | -13.00 | -36.31 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 13 / CHANNEL BANDWIDTH: 5MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 1560.000 | -45.54 | 4.93 | 6.19 | -44.28 | -13.00 | -31.28 | V |
| 2337.000 | -46.9 | 6.11 | 5.87 | -47.14 | -13.00 | -34.14 | V |
| 3114.000 | -51.84 | 7.18 | 7.74 | -51.28 | -13.00 | -38.28 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1560.000 | -47 | 4.93 | 6.19 | -45.74 | -13.00 | -32.74 | H |
| 2337.000 | -47.51 | 6.11 | 5.87 | -47.75 | -13.00 | -34.75 | H |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 1567.000 | -45.07 | 4.94 | 6.18 | -43.83 | -13.00 | -30.83 | V |
| 2344.000 | -47.48 | 6.12 | 5.88 | -47.72 | -13.00 | -34.72 | V |
| 3912.000 | -53.92 | 8.39 | 9.31 | -53.00 | -13.00 | -40.00 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1567.000 | -47.61 | 4.94 | 6.18 | -46.37 | -13.00 | -33.37 | H |
| 1966.000 | -48.7 | 5.63 | 5.46 | -48.87 | -13.00 | -35.87 | H |
| 2351.000 | -51.16 | 6.13 | 5.89 | -51.40 | -13.00 | -38.40 | H |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 1567.000 | -47.59 | 4.94 | 6.18 | -46.35 | -13.00 | -33.35 | V |
| 2351.000 | -47.74 | 6.13 | 5.89 | -47.98 | -13.00 | -34.98 | V |
| 3142.000 | -52.26 | 7.21 | 7.83 | -51.64 | -13.00 | -38.64 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1567.000 | -46.17 | 4.94 | 6.18 | -44.93 | -13.00 | -31.93 | H |
| 2351.000 | -50.31 | 6.13 | 5.89 | -50.55 | -13.00 | -37.55 | H |
| 3135.000 | -53.04 | 7.2 | 7.8 | -52.44 | -13.00 | -39.44 | H |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 13 / CHANNEL BANDWIDTH: 10MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 60% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 1560.000 | -48.84 | 4.93 | 6.19 | -47.58 | -13.00 | -34.58 | V |
| 2344.000 | -49.15 | 6.12 | 5.88 | -49.39 | -13.00 | -36.39 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1567.000 | -49.32 | 4.94 | 6.18 | -48.08 | -13.00 | -35.08 | H |
| 2351.000 | -52.3 | 6.13 | 5.89 | -52.54 | -13.00 | -39.54 | H |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 5MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 5137.000 | -43.21 | 9.49 | 10.65 | -42.05 | -13.00 | -29.05 | V |
| 6852.000 | -46.47 | 11.42 | 11.72 | -46.17 | -13.00 | -33.17 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 5137.000 | -41.6 | 9.49 | 10.65 | -40.44 | -13.00 | -27.44 | H |
| 6852.000 | -40.59 | 11.42 | 11.72 | -40.29 | -13.00 | -27.29 | H |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 3464.000 | -53.75 | 7.76 | 8.79 | -52.72 | -13.00 | -39.72 | V |
| 5200.000 | -44.4 | 9.56 | 10.68 | -43.28 | -13.00 | -30.28 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 3464.000 | -52.99 | 7.76 | 8.79 | -51.96 | -13.00 | -38.96 | H |
| 5200.000 | -44.03 | 9.56 | 10.68 | -42.91 | -13.00 | -29.91 | H |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 2155.000 | -48.64 | 5.87 | 5.62 | -48.89 | -13.00 | -35.89 | V |
| 5256.000 | -44 | 9.61 | 10.7 | -42.91 | -13.00 | -29.91 | V |
| N/A | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
| 2155.000 | -42.71 | 5.87 | 5.62 | -42.96 | -13.00 | -29.96 | H |
| 5256.000 | -43.72 | 9.61 | 10.7 | -42.63 | -13.00 | -29.63 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 10MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 3429.000 | -52.85 | 7.66 | 8.69 | -51.82 | -13.00 | -38.82 | V |
| 5137.000 | -47.45 | 9.49 | 10.65 | -46.29 | -13.00 | -33.29 | V |
| N/A | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| 5144.000 | -46.92 | 9.5 | 10.66 | -45.76 | -13.00 | -32.76 | H |
| 6859.000 | -46.16 | 11.44 | 11.73 | -45.87 | -13.00 | -32.87 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 3464.000 | -53.23 | 7.76 | 8.79 | -52.20 | -13.00 | -39.20 | V |
| 5200.000 | -47.79 | 9.56 | 10.68 | -46.67 | -13.00 | -33.67 | V |
| N/A | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| 2134.000 | -46.46 | 5.84 | 5.59 | -46.71 | -13.00 | -33.71 | H |
| 5200.000 | -47.22 | 9.56 | 10.68 | -46.10 | -13.00 | -33.10 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 2148.000 | -48.21 | 5.86 | 5.61 | -48.46 | -13.00 | -35.46 | V |
| 5249.000 | -47.85 | 9.6 | 10.7 | -46.75 | -13.00 | -33.75 | V |
| N/A | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
| 2155.000 | -42.5 | 5.87 | 5.62 | -42.75 | -13.00 | -29.75 | H |
| 5249.000 | -47.56 | 9.6 | 10.7 | -46.46 | -13.00 | -33.46 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 20MHz / QPSK

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 4052.000 | -52.43 | 8.41 | 9.44 | -51.40 | -13.00 | -38.40 | V |
| 5165.000 | -47.64 | 9.52 | 10.67 | -46.49 | -13.00 | -33.49 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2127.000 | -50.42 | 5.83 | 5.58 | -50.67 | -13.00 | -37.67 | H |
| 5151.000 | -46.64 | 9.51 | 10.66 | -45.49 | -13.00 | -32.49 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 2141.000 | -50.29 | 5.85 | 5.6 | -50.54 | -13.00 | -37.54 | V |
| 5207.000 | -49.94 | 9.57 | 10.68 | -48.83 | -13.00 | -35.83 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 4052.000 | -51.16 | 8.41 | 9.44 | -50.13 | -13.00 | -37.13 | H |
| 5200.000 | -49.48 | 9.56 | 10.68 | -48.36 | -13.00 | -35.36 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 2141.000 | -49.36 | 5.85 | 5.6 | -49.61 | -13.00 | -36.61 | V |
| 5242.000 | -50.93 | 9.6 | 10.7 | -49.83 | -13.00 | -36.83 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2148.000 | -42 | 5.86 | 5.61 | -42.25 | -13.00 | -29.25 | H |
| 5242.000 | -48.98 | 9.6 | 10.7 | -47.88 | -13.00 | -34.88 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 5MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 5137.000 | -42.15 | 9.49 | 10.65 | -40.99 | -13.00 | -27.99 | V |
| 6852.000 | -45.64 | 11.42 | 11.72 | -45.34 | -13.00 | -32.34 | V |
| N/A | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| 5137.000 | -38.59 | 9.49 | 10.65 | -37.43 | -13.00 | -24.43 | H |
| 7055.000 | -46.08 | 11.71 | 11.99 | -45.80 | -13.00 | -32.80 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 3471.000 | -54.04 | 7.78 | 8.81 | -53.01 | -13.00 | -40.01 | V |
| 5200.000 | -45.93 | 9.56 | 10.68 | -44.81 | -13.00 | -31.81 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 3464.000 | -52.83 | 7.76 | 8.79 | -51.80 | -13.00 | -38.80 | H |
| 5193.000 | -44.6 | 9.55 | 10.68 | -43.47 | -13.00 | -30.47 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 2155.000 | -47.31 | 5.87 | 5.62 | -47.56 | -13.00 | -34.56 | V |
| 5256.000 | -43.09 | 9.61 | 10.7 | -42.00 | -13.00 | -29.00 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2155.000 | -41.6 | 5.87 | 5.62 | -41.85 | -13.00 | -28.85 | H |
| 5256.000 | -43.16 | 9.61 | 10.7 | -42.07 | -13.00 | -29.07 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 10MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 3422.000 | -53.52 | 7.64 | 8.67 | -52.49 | -13.00 | -39.49 | V |
| 5144.000 | -47.18 | 9.5 | 10.66 | -46.02 | -13.00 | -33.02 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 5151.000 | -45.2 | 9.51 | 10.66 | -44.05 | -13.00 | -31.05 | H |
| 6859.000 | -46.38 | 11.44 | 11.73 | -46.09 | -13.00 | -33.09 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 3464.000 | -53.46 | 7.76 | 8.79 | -52.43 | -13.00 | -39.43 | V |
| 5200.000 | -47.68 | 9.56 | 10.68 | -46.56 | -13.00 | -33.56 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2134.000 | -47.42 | 5.84 | 5.59 | -47.67 | -13.00 | -34.67 | H |
| 5193.000 | -46.77 | 9.55 | 10.68 | -45.64 | -13.00 | -32.64 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 3506.000 | -55.41 | 7.88 | 8.91 | -54.38 | -13.00 | -41.38 | V |
| 5249.000 | -48.73 | 9.6 | 10.7 | -47.63 | -13.00 | -34.63 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2148.000 | -42.32 | 5.86 | 5.61 | -42.57 | -13.00 | -29.57 | H |
| 5249.000 | -46.52 | 9.6 | 10.7 | -45.42 | -13.00 | -32.42 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

## LTE Band 4 / CHANNEL BANDWIDTH: 20MHz / 16QAM

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Low channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 3975.000 | -53.18 | 8.36 | 9.38 | -52.16 | -13.00 | -39.16 | V |
| 5165.000 | -47.03 | 9.52 | 10.67 | -45.88 | -13.00 | -32.88 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2127.000 | -50.58 | 5.83 | 5.58 | -50.83 | -13.00 | -37.83 | H |
| 5172.000 | -46.18 | 9.53 | 10.67 | -45.04 | -13.00 | -32.04 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / Middle channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 4360.000 | -53.41 | 8.62 | 9.69 | -52.34 | -13.00 | -39.34 | V |
| 5193.000 | -48.65 | 9.55 | 10.68 | -47.52 | -13.00 | -34.52 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2141.000 | -45.35 | 5.85 | 5.6 | -45.60 | -13.00 | -32.60 | H |
| 5200.000 | -48.36 | 9.56 | 10.68 | -47.24 | -13.00 | -34.24 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

| | | | |
|---|---|---|---|
| **Operation Mode:** | Tx / High channel | **Test Date:** | March 23, 2014 |
| **Temperature:** | 25℃ | **Tested by:** | David Shu |
| **Humidity:** | 45% RH | **Polarity:** | Ver. / Hor. |

| Frequency (MHz) | S.G. (dBm) | Cable loss (dB) | Ant.Gain (dBi) | Emission level (dBm) | Limit (dBm) | Margin (dB) | Antenna Polarization (V/H) |
|---|---|---|---|---|---|---|---|
| 2148.000 | -48.91 | 5.86 | 5.61 | -49.16 | -13.00 | -36.16 | V |
| 5242.000 | -51.28 | 9.6 | 10.7 | -50.18 | -13.00 | -37.18 | V |
| N/A | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2155.000 | -41.52 | 5.87 | 5.62 | -41.77 | -13.00 | -28.77 | H |
| 5235.000 | -50.2 | 9.59 | 10.69 | -49.10 | -13.00 | -36.10 | H |
| N/A | | | | | | | |
| | | | | | | | |
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***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*