



# FCC TEST REPORT (PART 27)

|            |   |
|------------|---|
| Applicant: | Xiaomi Communications Co., Ltd.   |
| Address:   | #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085 |

|                           |   |
|---------------------------|---|
| Manufacturer or Supplier: | Xiaomi Communications Co., Ltd.   |
| Address:                  | #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085 |
| Product:                  | Mobile Phone  |
| Brand Name:               | Redmi   |
| Model Name:               | 2510DRA23L  |
| FCC ID                    | 2AFZZRA23L  |
| Date of tests             | Aug. 11, 2025 ~ Aug. 30, 2025   |

The tests have been carried out according to the requirements of the following standard:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> <b>FCC Part 27</b>        | <input checked="" type="checkbox"/> <b>ANSI/TIA/EIA-603-E</b> |
| <input checked="" type="checkbox"/> <b>ANSI/TIA/EIA-603-D</b> | <input checked="" type="checkbox"/> <b>ANSI C63.26-2015</b>   |
| <input checked="" type="checkbox"/> <b>FCC Part 2</b>         |   |

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

|   |  |
|---|--|
| Prepared by Hanwen Xu<br>Engineer / Mobile Department | Approved by Peibo Sun<br>Manager / Mobile Department |
|   |  |
| Date: Aug. 30, 2025                                   | Date: Aug. 30, 2025                                  |

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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## RELEASE CONTROL RECORD

| ISSUE NO.             | REASON FOR CHANGE | DATE ISSUED   |
|-----------------------|-------------------|---------------|
| PSU-QBJ2508070215RF03 | Original release  | Aug. 30, 2025 |



# 1. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC PART 27 & PART 2   |   |            |           |
|--|---|------------|-----------|
| STANDARD SECTION   | TEST TYPE AND LIMIT   | RESULT     | TEST LAB* |
| §2.1046  | Conducted Output Power  | Compliance | A         |
| §27.50(c)(10)<br>§27.50(b)(10)   | Effective Radiated Power<br>(WCMDA Band 4)(Band 7) (Band 12) (Band 13) (Band 17)                | Compliance | A         |
| §27.50(d)(4)<br>§27.50(h)(2)   | Equivalent Isotropically Radiated Power<br>(WCMDA Band 4)(Band 7) (Band 12) (Band 13) (Band 17) | Compliance | A         |
| §2.1055<br>§27.54  | Frequency Stability   | Compliance | A         |
| §2.1049  | Occupied Bandwidth  | Compliance | A         |
| §2.1051<br>§27.53(c)(2)<br>§27.53(g)<br>§27.53(h)<br>§27.53(m)(4)              | Conducted Band Edge Measurements<br>(WCMDA Band 4) (Band 7) (Band 12) (Band 13)                 | Compliance | A         |
| §2.1051<br>§27.53(g)<br>§27.53(c)(2)<br>§27.53(f)<br>§27.53(h)<br>§27.53(m)(4) | Conducted Spurious Emissions<br>(WCMDA Band 4)(Band 7) (Band 12) (Band 13)                      | Compliance | A         |
| §2.1053<br>§27.53(c)(2)<br>§27.53(f)<br>§27.53(g)<br>§27.53(h)<br>§27.53(m)(4) | Radiated Spurious Emissions<br>(WCMDA Band 4)(Band 7) (Band 12) (Band 13)                       | Compliance | A         |
| §27.50   | Peak to average ratio*  | Compliance | A         |

\* Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.



**BUREAU VERITAS** Test Report No.: PSU-QBJ2508070215RF03

**\*Test Lab Information Reference**

**Lab A:**

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

**Lab Address:**

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province, China

**Accredited Test Lab Cert 6613.01**

**The FCC Site Registration No. is 434559; The Designation No. is CN1325.**

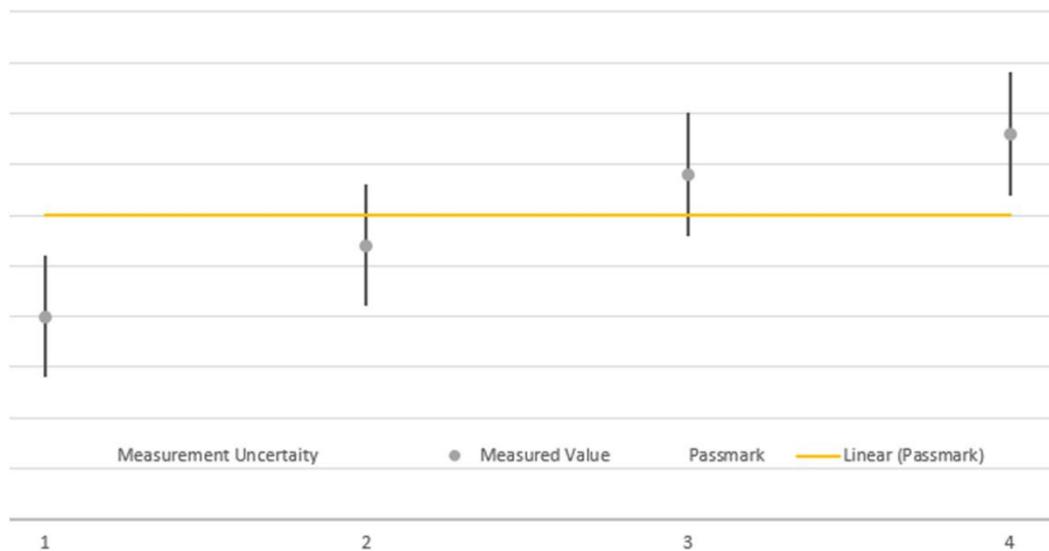


### 1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| MEASUREMENT                                      | UNCERTAINTY |
|--|-------------|
| Frequency Stability                              | ±76.97Hz    |
| Radiated emissions (9KHz~30MHz)                  | ±2.68dB     |
| Radiated emissions & Radiated Power (30MHz~1GHz) | ±4.98dB     |
| Radiated emissions & Radiated Power (1GHz ~6GHz) | ±4.70dB     |
| Radiated emissions (6GHz ~18GHz)                 | ±4.60dB     |
| Radiated emissions (18GHz ~40GHz)                | ±4.12dB     |
| Conducted emissions                              | ±4.01dB     |
| Occupied Channel Bandwidth                       | ±43.58KHz   |
| Conducted Output power                           | ±2.06dB     |
| Band Edge Measurements                           | ±4.70dB     |

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



The verdicts in this test report are given according the above diagram:

| Case | Measured Value  | Uncertainty Range | Verdict |
|------|-----------------|-------------------|---------|
| 1    | below pass mark | below pass mark   | Passed  |
| 2    | below pass mark | within pass mark  | Passed  |
| 3    | above pass mark | within pass mark  | Failed  |
| 4    | above pass mark | above pass mark   | Failed  |

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.



## 1.2 TEST SITE AND INSTRUMENTS

| Equipment                          | Manufacturer                 | Model No.        | Serial No.            | Last Cal. | Next Cal. |
|------------------------------------|------------------------------|------------------|-----------------------|-----------|-----------|
| Pre-Amplifier                      | R&S                          | SCU18F1          | 100815                | Aug.30,23 | Aug.29,25 |
| Pre-Amplifier                      | R&S                          | SCU08F1          | 101028                | Jan.22,24 | Jan.21,26 |
| Vector Signal Generator            | R&S                          | SMBV100B         | 102176                | Mar.29,24 | Mar.28,26 |
| Signal Generator                   | R&S                          | SMB100A          | 182185                | Mar.29,24 | Mar.28,26 |
| 3m Fully-anechoic Chamber          | TDK                          | 9m*6m*6m         | HRSW-SZ-EMC-01Chamber | Nov.25,22 | Nov.24,25 |
| 3m Semi-anechoic Chamber           | TDK                          | 9m*6m*6m         | HRSW-SZ-EMC-02Chamber | Aug.20,25 | Aug.19,28 |
| EMI TEST Receiver                  | R&S                          | ESR26            | 101734                | Mar.28,24 | Mar.27,26 |
| EMI TEST Receiver                  | R&S                          | ESW44            | 101973                | Mar.28,24 | Mar.27,26 |
| Bilog Antenna                      | SCHWARZBECK                  | VULB 9163        | 1264                  | Jul.04,25 | Jul.03,27 |
| Horn Antenna                       | ETS-LINDGREN                 | 3117             | 227836                | Aug.20,25 | Aug.19,27 |
| Horn Antenna (18GHz-40GHz)         | Steatite Q-par Antennas      | QMS 00880        | 23486                 | Jul.15,24 | Jul.14,26 |
| Horn Antenna                       | Steatite Q-par Antennas      | QMS 00208        | 23485                 | Mar.22,25 | Mar.21,27 |
| Loop Antenna                       | SCHWARZ                      | HFH2-Z2/Z2E      | 100976                | Feb.22,25 | Feb.21,27 |
| WIDEBANDRADIO COMMUNICATION TESTER | R&S                          | CMW500           | 169399                | Jun.19,24 | Jun.18,26 |
| Test Software                      | EMC32                        | EMC32            | N/A                   | N/A       | N/A       |
| 6DB attenuator                     | Tonscend Technology Co., Ltd | N/A              | 23062787              | N/A       | N/A       |
| Test Software                      | ELEKTRA                      | ELEKTRA4.32      | N/A                   | N/A       | N/A       |
| Open Switch and Control Unit       | R&S                          | OSP220           | 101964                | N/A       | N/A       |
| DC Source                          | HYELEC                       | HY3010B          | 551016                | Aug.31,23 | Aug.30,25 |
| Hygrothermograph                   | DELI                         | 20210528         | SZ014                 | Mar.18,25 | Mar.17,27 |
| PC                                 | LENOVO                       | E14              | HRSW0024              | N/A       | N/A       |
| TMC-AMI18843A(CABLE)               | R&S                          | HF290-NMNM-7.00M | N/A                   | N/A       | N/A       |
| TMC-AMI18843A(CABLE)               | R&S                          | HF290-NMNM-4.00M | N/A                   | N/A       | N/A       |
| CABLE                              | R&S                          | W13.02           | N/A                   | Apr.26,25 | Apr.25,26 |
| CABLE                              | R&S                          | W12.14           | N/A                   | Apr.26,25 | Apr.25,26 |
| CABLE                              | R&S                          | J12J103539-00-1  | SEP-03-20-069         | Apr.26,25 | Apr.25,26 |
| CABLE                              | R&S                          | J12J103539-00-1  | SEP-03-20-070         | Apr.26,25 | Apr.25,26 |
| Temperature Chamber                | votsch                       | VT4002           | 58566078100050        | May.30,24 | May.29,26 |



**NOTE:**

1. The calibration interval of the above test instruments is 12/ 24/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 434559; The Designation No. is CN1325.



## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

|  |   |                       |                |
|--|---|-----------------------|----------------|
| <b>PRODUCT*</b>                                | Mobile Phone  |                       |                |
| <b>BRAND NAME*</b>                             | Redmi   |                       |                |
| <b>MODEL NAME*</b>                             | 2510DRA23L  |                       |                |
| <b>NOMINAL VOLTAGE*</b>                        | 5/3.6-11V dc (adapter or host equipment)<br>3.92Vdc (Li-ion, battery) |                       |                |
| <b>MODULATION TECHNOLOGY</b>                   | <b>WCDMA IV</b>   | QPSK,16QAM            |                |
|  | <b>LTE</b>  | QPSK,16QAM, 64QAM     |                |
| <b>FREQUENCY RANGE</b>                         | <b>WCDMA IV</b>   | 1712.4MHz ~ 1752.6MHz |                |
|  | <b>LTE Band 7<br/>Channel Bandwidth: 5MHz</b>                         | 2502.5MHz ~ 2567.5MHz |                |
|  | <b>LTE Band 7<br/>Channel Bandwidth: 10MHz</b>                        | 2505MHz ~ 2565MHz     |                |
|  | <b>LTE Band 7<br/>Channel Bandwidth: 15MHz</b>                        | 2507.5MHz ~ 2562.5MHz |                |
|  | <b>LTE Band 7<br/>Channel Bandwidth: 20MHz</b>                        | 2510MHz ~ 2560MHz     |                |
|  | <b>LTE Band 12<br/>Channel Bandwidth: 1.4MHz</b>                      | 699.7MHz ~ 715.3MHz   |                |
|  | <b>LTE Band 12<br/>Channel Bandwidth: 3MHz</b>                        | 700.5MHz ~ 714.5MHz   |                |
|  | <b>LTE Band 12<br/>Channel Bandwidth: 5MHz</b>                        | 701.5MHz ~ 713.5MHz   |                |
|  | <b>LTE Band 12<br/>Channel Bandwidth: 10MHz</b>                       | 704MHz ~ 711MHz       |                |
|  | <b>LTE Band 13<br/>Channel Bandwidth: 5MHz</b>                        | 779.5MHz ~ 784.5MHz   |                |
|  | <b>LTE Band 13<br/>Channel Bandwidth: 10MHz</b>                       | 782MHz                |                |
|  | <b>LTE Band 17<br/>Channel Bandwidth: 5MHz</b>                        | 706.5MHz ~ 713.5MHz   |                |
|  | <b>LTE Band 17<br/>Channel Bandwidth: 10MHz</b>                       | 709MHz ~ 711 MHz      |                |
|  | <b>MAX. EIRP/ERP POWER</b>  | <b>WCDMA IV</b>       | ANT0: 144.88mW |
|  |   |                       | ANT1: 206.06mW |
| <b>LTE Band 7<br/>Channel Bandwidth: 5MHz</b>  |   | ANT0: 169.43mW        |                |
|  |   | ANT1: 147.57mW        |                |
| <b>LTE Band 7<br/>Channel Bandwidth: 10MHz</b> |   | ANT0: 170.22mW        |                |
|  | ANT1: 145.88mW  |                       |                |
| <b>LTE Band 7<br/>Channel Bandwidth: 15MHz</b> | ANT0: 169.43mW  |                       |                |
|  | ANT1: 145.21mW  |                       |                |
| <b>LTE Band 7</b>                              | ANT0: 173.78mW  |                       |                |



|   |  |                |
|---|--|----------------|
|   | <b>Channel Bandwidth: 20MHz</b>                  | ANT1: 148.25mW |
|   | <b>LTE Band 12<br/>Channel Bandwidth: 1.4MHz</b> | ANT0: 59.02mW  |
|   |  | ANT1: 41.40mW  |
|   | <b>LTE Band 12<br/>Channel Bandwidth: 3MHz</b>   | ANT0: 58.21mW  |
|   |  | ANT1: 41.59mW  |
|   | <b>LTE Band 12<br/>Channel Bandwidth: 5MHz</b>   | ANT0: 58.88mW  |
|   |  | ANT1: 41.50mW  |
|   | <b>LTE Band 12<br/>Channel Bandwidth: 10MHz</b>  | ANT0: 59.43mW  |
|   |  | ANT1: 41.98mW  |
|   | <b>LTE Band 13<br/>Channel Bandwidth: 5MHz</b>   | ANT0: 52.24mW  |
| ANT1: 35.32mW                                   |  |                |
| <b>LTE Band 13<br/>Channel Bandwidth: 10MHz</b> | ANT0: 52.36mW                                    |                |
|   | ANT1: 38.19mW                                    |                |
| <b>LTE Band 17<br/>Channel Bandwidth: 5MHz</b>  | ANT0: 57.81mW                                    |                |
|   | ANT1: 41.40mW                                    |                |
| <b>LTE Band 17<br/>Channel Bandwidth: 10MHz</b> | ANT0: 59.29mW                                    |                |
|   | ANT1: 41.88mW                                    |                |
| <b>EMISSION<br/>DESIGNATOR</b>                  | <b>WCDMA IV</b>                                  | 4M15F9W        |
|   | <b>LTE Band 7<br/>Channel Bandwidth: 5MHz</b>    | QPSK: 4M50G7D  |
|   |  | 16QAM: 4M52W7D |
|   |  | 64QAM: 4M50W7D |
|   | <b>LTE Band 7<br/>Channel Bandwidth: 10MHz</b>   | QPSK:8M99G7D   |
|   |  | 16QAM: 8M99W7D |
| 64QAM: 8M99W7D                                  |  |                |
| <b>EMISSION<br/>DESIGNATOR</b>                  | <b>LTE Band 7<br/>Channel Bandwidth: 15MHz</b>   | QPSK: 13M5G7D  |
|   |  | 16QAM: 13M5W7D |
|   |  | 64QAM: 13M5W7D |
|   | <b>LTE Band 7<br/>Channel Bandwidth: 20MHz</b>   | QPSK: 17M9G7D  |
|   |  | 16QAM: 18M0W7D |
|   |  | 64QAM: 17M9W7D |
|   | <b>LTE Band 12<br/>Channel Bandwidth: 1.4MHz</b> | QPSK: 1M10G7D  |
|   |  | 16QAM: 1M10W7D |
|   |  | 64QAM: 1M10W7D |
|   | <b>LTE Band 12</b>                               | QPSK: 2M70G7D  |



|                             |  |                |
|-----------------------------|--|----------------|
|                             | <b>Channel Bandwidth: 3MHz</b>   | 16QAM: 2M69W7D |
|                             |  | 64QAM: 2M70W7D |
|                             | <b>LTE Band 12<br/>Channel Bandwidth: 5MHz</b>   | QPSK: 4M51G7D  |
|                             |  | 16QAM: 4M52W7D |
|                             |  | 64QAM: 4M50W7D |
|                             | <b>LTE Band 12<br/>Channel Bandwidth: 10MHz</b>  | QPSK: 8M98G7D  |
|                             |  | 16QAM: 8M98W7D |
|                             |  | 64QAM: 8M99W7D |
|                             | <b>LTE Band 13<br/>Channel Bandwidth: 5MHz</b>   | QPSK: 4M50G7D  |
|                             |  | 16QAM: 4M50W7D |
|                             |  | 64QAM: 4M50W7D |
|                             | <b>LTE Band 13<br/>Channel Bandwidth: 10MHz</b>  | QPSK: 8M97G7D  |
| 16QAM: 8M96W7D              |  |                |
| 64QAM: 8M97W7D              |  |                |
| <b>ANTENNA GAIN*</b>        | WCDMA IV   | ANT0:-5.5dBi   |
|                             |  | ANT1:-6.9dBi   |
|                             | LTE BAND7  | ANT0:-1.7dBi   |
|                             |  | ANT1:-2.1dBi   |
|                             | LTE BAND12   | ANT0:-5dBi     |
|                             |  | ANT1:-6.6dBi   |
|                             | LTE BAND13   | ANT0:-5.4dBi   |
|                             |  | ANT1:-6.8dBi   |
|                             | LTE BAND17   | ANT0:-5dBi     |
|                             |  | ANT1:-6.6dBi   |
| <b>ANTENNA TYPE*</b>        | PIFA Antenna   |                |
| <b>HW VERSION*</b>          | 99007_1_12   |                |
| <b>SW VERSION*</b>          | Xiaomi HyperOS 2.2   |                |
| <b>I/O PORTS*</b>           | Refer to user's manual   |                |
| <b>CABLE SUPPLIED*</b>      | USB cable1: non-shielded cable, with w/o ferrite core, 1.0 meter<br>USB cable2: non-shielded cable, with w/o ferrite core, 1.0 meter<br>USB cable3: non-shielded cable, with w/o ferrite core, 1.0 meter<br>USB cable4: non-shielded cable, with w/o ferrite core, 1.0 meter |                |
| <b>EXTREME TEMPERATURE*</b> | 0~40°C   |                |



|                         |          |
|-------------------------|----------|
| <b>EXTREME VOLTAGE*</b> | 3.6~4.5V |
|-------------------------|----------|

**NOTE:**

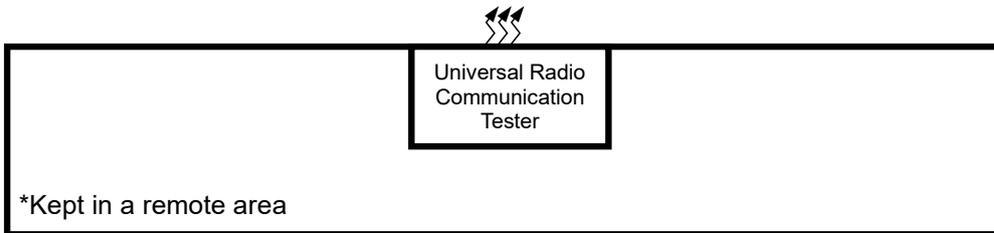
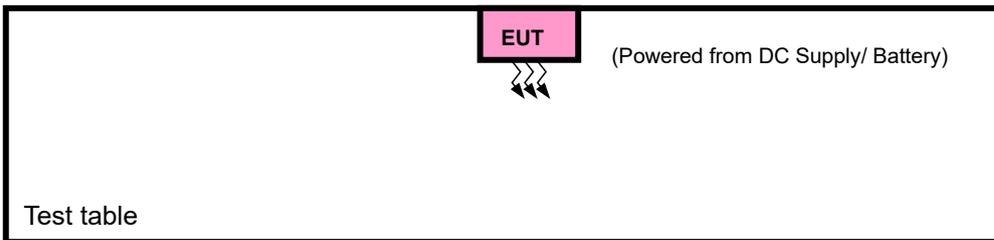
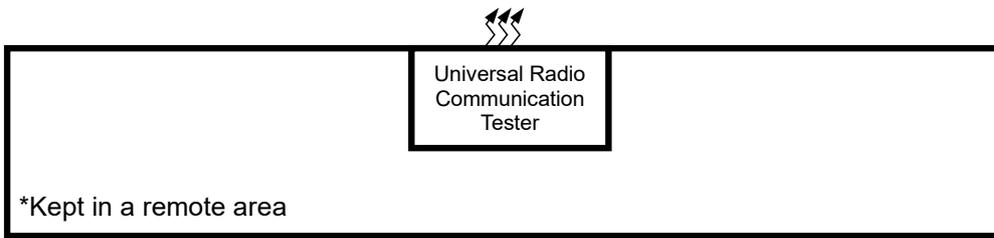
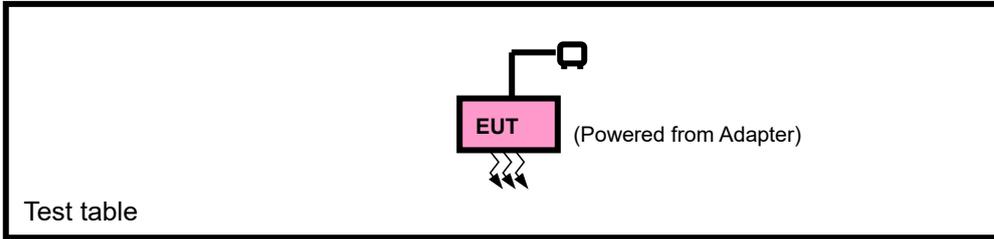
- 1. \*Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information , Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
- 2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 3. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitter and two receivers.

| <b>MODULATION MODE</b> | <b>TX FUNCTION</b> |
|------------------------|--------------------|
| <b>WCDMA</b>           | 2TX/2RX            |
| <b>LTE</b>             | 2TX/2RX            |

- 4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in the test report.



**FOR RADIATION EMISSION TEST**





## 2.2 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| NO. | PRODUCT   | BRAND  | MODEL NO.    | SERIAL NO. | FCC ID |
|-----|-----------|--------|--------------|------------|--------|
| 1   | Laptop    | Lenovo | ThinkPad E14 | HRSW00024  | N/A    |
| 2   | DC Source | HYELEC | HY3010B      | 551016     | N/A    |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|---|
| 1   | DC Line: Unshielded, Detachable, 1.0m;              |
| 2   | PC USB Line: Unshielded, Detachable, 1.0m;          |



### 2.3 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

| EUT CONFIGURE MODE | DESCRIPTION                            |
|--------------------|--|
| A                  | EUT + Adapter with WCDMA or LTE link   |
| B                  | EUT + DC Supply with WCDMA or LTE link |

| WCDMA MODE         |                       |                   |                  |       |
|--------------------|-----------------------|-------------------|------------------|-------|
| EUT CONFIGURE MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL   | MODE  |
| A                  | EIRP                  | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| B                  | FREQUENCY STABILITY   | 1312 to 1513      | 1312, 1513       | WCDMA |
| A                  | OCCUPIED BANDWIDTH    | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| A                  | BAND EDGE             | 1312 to 1513      | 1312, 1513       | WCDMA |
| A                  | PEAK TO AVERAGE RATIO | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| A                  | CONDCUDED EMISSION    | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| A                  | RADIATED EMISSION     | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |

| LTE BAND 7 MODE    |                     |                   |                     |                   |                    |                      |
|--------------------|---------------------|-------------------|---------------------|-------------------|--------------------|----------------------|
| EUT CONFIGURE MODE | TEST ITEM           | AVAILABLE CHANNEL | TESTED CHANNEL      | CHANNEL BANDWIDTH | MODULATION         | MODE                 |
| A                  | EIRP                | 20775 to 21425    | 20775, 21100, 21425 | 5MHz              | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset   |
|                    |                     | 20800 to 21400    | 20800, 21100, 21400 | 10MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0RB offset    |
|                    |                     | 20825 to 21375    | 20825, 21100, 21375 | 15MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset   |
|                    |                     | 20850 to 21350    | 20850, 21100, 21350 | 20MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset   |
| B                  | FREQUENCY STABILITY | 20800 to 21400    | 20800, 21400        | 10MHz             | QPSK               | 100 RB / 0 RB offset |
| A                  | OCCUPIED BANDWIDTH  | 20775 to 21425    | 20775, 21100, 21425 | 5MHz              | QPSK, 16QAM, 64QAM | 25 RB / 0 RB offset  |
|                    |                     | 20800 to 21400    | 20800, 21100, 21400 | 10MHz             | QPSK, 16QAM, 64QAM | 50 RB / 0 RB offset  |
|                    |                     | 20825 to 21375    | 20825, 21100, 21375 | 15MHz             | QPSK, 16QAM, 64QAM | 75 RB / 0 RB offset  |



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|          |                       |                |                     |                |                     |   |      |                    |
|----------|-----------------------|----------------|---------------------|----------------|---------------------|---|------|--------------------|
|          |                       | 20850 to 21350 | 20850, 21100, 21350 | 20MHz          | QPSK, 16QAM, 64QAM  | 100 RB / 0 RB offset                        |      |                    |
| <b>A</b> | PEAK TO AVERAGE RATIO | 20850 to 21350 | 20850, 21100, 21350 | 20MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>100 RB / 0 RB offset  |      |                    |
| <b>A</b> | BAND EDGE             | 20775 to 21425 | 20775               | 5MHz           | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>25 RB / 0 RB offset   |      |                    |
|          |                       |                | 21425               | 5MHz           | QPSK, 16QAM, 64QAM  | 1 RB / 24 RB offset<br>25 RB / 0 RB offset  |      |                    |
|          |                       | 20800 to 21400 | 20800               | 10MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>50 RB / 0 RB offset   |      |                    |
|          |                       |                | 21400               | 10MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 49 RB offset<br>50 RB / 0 RB offset  |      |                    |
|          |                       | 20825 to 21375 | 20825               | 15MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>75 RB / 0 RB offset   |      |                    |
|          |                       |                | 21375               | 15MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 74 RB offset<br>75 RB / 0 RB offset  |      |                    |
|          |                       | 20850 to 21350 | 20850               | 20MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>100 RB / 0 RB offset  |      |                    |
|          |                       |                | 21350               | 20MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 99 RB offset<br>100 RB / 0 RB offset |      |                    |
|          |                       | <b>A</b>       | CONDCUDED EMISSION  | 20775 to 21425 | 20775, 21100, 21425 | 5MHz  | QPSK | 1 RB / 0 RB offset |
|          |                       |                |                     | 20800 to 21400 | 20800, 21100, 21400 | 10MHz                                       | QPSK | 1 RB / 0 RB offset |
|          |                       |                |                     | 20825 to 21375 | 20825, 21100, 21375 | 15MHz                                       | QPSK | 1 RB / 0 RB offset |
|          |                       |                |                     | 20850 to 21350 | 20850, 21100, 21350 | 20MHz                                       | QPSK | 1 RB / 0 RB offset |
| <b>A</b> | RADIATED EMISSION     | 20775 to 21425 | 21100               | 5MHz           | QPSK                | 1 RB / 0 RB offset                          |      |                    |
|          |                       | 20800 to 21400 | 20800, 21100, 21400 | 10MHz          | QPSK                | 1 RB / 0 RB offset                          |      |                    |
|          |                       | 20825 to 21375 | 21100               | 15MHz          | QPSK                | 1 RB / 0 RB offset                          |      |                    |
|          |                       | 20850 to 21350 | 21100               | 20MHz          | QPSK                | 1 RB / 0 RB offset                          |      |                    |

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

| LTE BAND 12 MODE   |           |                   |                      |                   |                    |                    |
|--------------------|-----------|-------------------|----------------------|-------------------|--------------------|--------------------|
| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL       | CHANNEL BANDWIDTH | MODULATION         | MODE               |
| <b>A</b>           | ERP       | 23017 to 23173    | 23017, 23095 , 23173 | 1.4MHz            | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset |
|                    |           | 23025 to 23165    | 23025, 23095 ,23165  | 3MHz              | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset |
|                    |           | 23035 to 23155    | 23035, 23095 ,23155  | 5MHz              | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset |
|                    |           | 23060 to 23130    | 23060, 23095 ,23130  | 10MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset |



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|          |                       |                |                     |                |                     |  |  |                    |
|----------|-----------------------|----------------|---------------------|----------------|---------------------|--|--|--------------------|
| <b>B</b> | FREQUENCY STABILITY   | 23060 to 23130 | 23060, 23130        | 10MHz          | QPSK, 16QAM, 64QAM  | 50 RB / 0 RB offset                        |  |                    |
| <b>A</b> | OCCUPIED BANDWIDTH    | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz         | QPSK, 16QAM, 64QAM  | 6 RB / 0 RB offset                         |  |                    |
|          |                       | 23025 to 23165 | 23025, 23095, 23165 | 3MHz           | QPSK, 16QAM, 64QAM  | 15 RB / 0 RB offset                        |  |                    |
|          |                       | 23035 to 23155 | 23035, 23095, 23155 | 5MHz           | QPSK, 16QAM, 64QAM  | 25 RB / 0 RB offset                        |  |                    |
|          |                       | 23060 to 23130 | 23060, 23095, 23130 | 10MHz          | QPSK, 16QAM, 64QAM  | 50 RB / 0 RB offset                        |  |                    |
| <b>A</b> | PEAK TO AVERAGE RATIO | 23060 to 23130 | 23060, 23095, 23130 | 10MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>50 RB / 0 RB offset  |  |                    |
| <b>A</b> | BAND EDGE             | 23017 to 23173 | 23017               | 1.4MHz         | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>6 RB / 0 RB offset   |  |                    |
|          |                       |                | 23173               | 1.4MHz         | QPSK, 16QAM, 64QAM  | 1 RB / 5 RB offset<br>6 RB / 0 RB offset   |  |                    |
|          |                       |                | 23025 to 23165      | 23025          | 3MHz                | QPSK, 16QAM, 64QAM                         | 1 RB / 0 RB offset<br>15 RB / 0 RB offset  |                    |
|          |                       |                |                     | 23165          | 3MHz                | QPSK, 16QAM, 64QAM                         | 1 RB / 14 RB offset<br>15 RB / 0 RB offset |                    |
|          |                       | 23035 to 23155 | 23035               | 5MHz           | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>25 RB / 0 RB offset  |  |                    |
|          |                       |                | 23155               | 5MHz           | QPSK, 16QAM, 64QAM  | 1 RB / 24 RB offset<br>25 RB / 0 RB offset |  |                    |
|          |                       | 23060 to 23130 | 23060               | 10MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 0 RB offset<br>50 RB / 0 RB offset  |  |                    |
|          |                       |                | 23130               | 10MHz          | QPSK, 16QAM, 64QAM  | 1 RB / 49 RB offset<br>50 RB / 0 RB offset |  |                    |
|          |                       | <b>A</b>       | CONDCUETED EMISSION | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz                                     | QPSK                                       | 1 RB / 0 RB offset |
|          |                       |                |                     | 23025 to 23165 | 23025, 23095, 23165 | 3MHz                                       | QPSK                                       | 1 RB / 0 RB offset |
|          |                       |                |                     | 23035 to 23155 | 23035, 23095, 23155 | 5MHz                                       | QPSK                                       | 1 RB / 0 RB offset |
|          |                       |                |                     | 23060 to 23130 | 23060, 23095, 23130 | 10MHz                                      | QPSK                                       | 1 RB / 0 RB offset |
| <b>A</b> | RADIATED EMISSION     | 23017 to 23173 | 23095               | 1.4MHz         | QPSK                | 1 RB / 0 RB offset                         |  |                    |
|          |                       | 23025 to 23165 | 23095               | 3MHz           | QPSK                | 1 RB / 0 RB offset                         |  |                    |
|          |                       | 23035 to 23155 | 23035, 23095, 23155 | 5MHz           | QPSK                | 1 RB / 0 RB offset                         |  |                    |
|          |                       | 23060 to 23130 | 23095               | 10MHz          | QPSK                | 1 RB / 0 RB offset                         |  |                    |

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

| LTE BAND 17 MODE   |           |                   |                     |                   |                    |                    |
|--------------------|-----------|-------------------|---------------------|-------------------|--------------------|--------------------|
| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL      | CHANNEL BANDWIDTH | MODULATION         | MODE               |
| <b>A</b>           | ERP       | 23755 to 23825    | 23755, 23790, 23825 | 5MHz              | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset |
|                    |           | 23780 to 23800    | 23780, 23790, 23800 | 10MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB offset |

**Note:**

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. LTE Band 17 are covered by LTE Band 12, Because it is a subset of LTE Band 12 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE Band 12.



| LTE BAND 13 MODE   |                       |                   |                     |                   |                     |  |      |                    |
|--------------------|-----------------------|-------------------|---------------------|-------------------|---------------------|--|------|--------------------|
| EUT CONFIGURE MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL      | CHANNEL BANDWIDTH | MODULATION          | MODE                                       |      |                    |
| A                  | ERP                   | 23205 to 23255    | 23205, 23230, 23255 | 5MHz              | QPSK,16QAM,64QAM    | 1 RB / 0 RB offset                         |      |                    |
|                    |                       | 23230             | 23230               | 10MHz             | QPSK,16QAM,64QAM    | 1 RB / 0 RB offset                         |      |                    |
| B                  | FREQUENCY STABILITY   | 23205 to 23255    | 23205, 23255        | 5MHz              | QPSK,16QAM,64QAM    | 50 RB / 0 RB offset                        |      |                    |
| A                  | OCCUPIED BANDWIDTH    | 23205 to 23255    | 23205, 23230, 23255 | 5MHz              | QPSK,16QAM,64QAM    | 25 RB / 0 RB offset                        |      |                    |
|                    |                       | 23230             | 23230               | 10MHz             | QPSK,16QAM,64QAM    | 50 RB / 0 RB offset                        |      |                    |
| A                  | PEAK TO AVERAGE RATIO | 23205 to 23255    | 23205, 23230, 23255 | 5MHz              | QPSK,16QAM,64QAM    | 1 RB / 0 RB offset<br>50 RB / 0 RB offset  |      |                    |
| A                  | BAND EDGE             | 23205 to 23255    | 23205               | 5MHz              | QPSK,16QAM,64QAM    | 1 RB / 0 RB offset<br>25 RB / 0 RB offset  |      |                    |
|                    |                       |                   | 23255               | 5MHz              | QPSK,16QAM,64QAM    | 1 RB / 24 RB offset<br>25 RB / 0 RB offset |      |                    |
|                    |                       | 23230             | 23230               | 10MHz             | QPSK,16QAM,64QAM    | 1 RB / 0 RB offset                         |      |                    |
|                    |                       |                   |                     |                   |                     | 1 RB / 49 RB offset<br>50 RB / 0 RB offset |      |                    |
|                    |                       | A                 | CONDCUDED EMISSION  | 23205 to 23255    | 23205, 23230, 23255 | 5MHz                                       | QPSK | 1 RB / 0 RB offset |
|                    |                       |                   |                     | 23230             | 23230               | 10MHz                                      | QPSK | 1 RB / 0 RB offset |
| A                  | RADIATED EMISSION     | 23205 to 23255    | 23205, 23230, 23255 | 5MHz              | QPSK                | 1 RB / 0 RB offset                         |      |                    |
|                    |                       | 23230             | 23230               | 10MHz             | QPSK                | 1 RB / 0 RB offset                         |      |                    |

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

| TEST CONDITION        |                          |                       |           |
|-----------------------|--------------------------|-----------------------|-----------|
| TEST ITEM             | ENVIRONMENTAL CONDITIONS | INPUT POWER           | TESTED BY |
| ERP                   | 23deg. C, 70%RH          | DC 3.92V By Battery   | Hanwen Xu |
| FREQUENCY STABILITY   | 23deg. C, 70%RH          | DC 3.92V By DC Source | Hanwen Xu |
| OCCUPIED BANDWIDTH    | 23deg. C, 70%RH          | DC 3.92V By Battery   | Hanwen Xu |
| BAND EDGE             | 23deg. C, 70%RH          | DC 3.92V By Battery   | Hanwen Xu |
| CONDCUDED EMISSION    | 23deg. C, 70%RH          | DC 3.92V By Battery   | Hanwen Xu |
| RADIATED EMISSION     | 23deg. C, 70%RH          | AC 120V/60Hz          | Hanwen Xu |
| PEAK TO AVERAGE RATIO | 23deg. C, 70%RH          | DC 3.92V By Battery   | Hanwen Xu |



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## **2.4 GENERAL DESCRIPTION OF APPLIED STANDARDS**

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 27**

**KDB 971168 D01 Power Meas License Digital Systems v03r01**

**ANSI/TIA/EIA-603-D**

**ANSI/TIA/EIA-603-E**

**ANSI C63.26-2015**

**NOTE:** All test items have been performed and recorded as per the above standards.



### 3 TEST TYPES AND RESULTS

#### 3.1 OUTPUT POWER MEASUREMENT

##### 3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1-watt EIRP.

According to the specific rule Part 27.50(c)(10) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698–746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

Part 27.50(b)(10): Portable stations (hand-held devices) transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

##### 3.1.2 TEST PROCEDURES

###### **EIRP MEASUREMENT:**

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T - L_C$$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

$P_{\text{Meas}}$  = measured transmitter output power or PSD, in dBm or dBW;

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

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

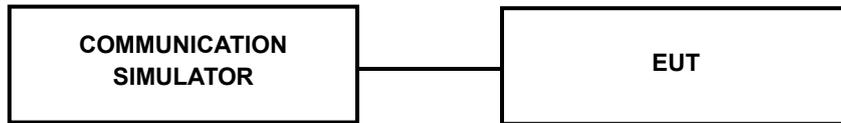
###### **CONDUCTED POWER MEASUREMENT:**

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



### 3.1.3 TEST SETUP

#### CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).



### 3.1.4 TEST RESULTS

#### CONDUCTED OUTPUT POWER (dBm)

| Band                      | WCDMA IV ANT0 |               |               |
|---------------------------|---------------|---------------|---------------|
| <b>TX Channel</b>         | <b>1312</b>   | <b>1413</b>   | <b>1513</b>   |
| <b>Rx Channel</b>         | <b>1537</b>   | <b>1638</b>   | <b>1738</b>   |
| <b>Frequency</b>          | <b>1712.4</b> | <b>1732.6</b> | <b>1752.6</b> |
| <b>RMC 12.2K</b>          | 23.93         | <b>24.01</b>  | 23.99         |
| <b>HSDPA Subtest-1</b>    | 22.80         | 22.84         | 22.75         |
| <b>HSDPA Subtest-2</b>    | 22.90         | 22.94         | 22.89         |
| <b>HSDPA Subtest-3</b>    | 22.22         | 22.21         | 22.30         |
| <b>HSDPA Subtest-4</b>    | 22.40         | 22.42         | 22.31         |
| <b>DC-HSDPA Subtest-1</b> | 22.66         | 22.63         | 22.64         |
| <b>DC-HSDPA Subtest-2</b> | 22.80         | 22.81         | 22.79         |
| <b>DC-HSDPA Subtest-3</b> | 22.10         | 22.10         | 22.18         |
| <b>DC-HSDPA Subtest-4</b> | 22.37         | 22.37         | 22.29         |
| <b>HSUPA Subtest-1</b>    | 20.56         | 20.58         | 20.56         |
| <b>HSUPA Subtest-2</b>    | 20.71         | 20.80         | 20.94         |
| <b>HSUPA Subtest-3</b>    | 21.56         | 21.64         | 21.54         |
| <b>HSUPA Subtest-4</b>    | 20.36         | 20.54         | 20.29         |
| <b>HSUPA Subtest-5</b>    | 21.68         | 21.70         | 21.68         |
| <b>HSPA+ Subtest-1</b>    | 22.28         | 22.26         | 22.18         |

| Band                      | WCDMA IV ANT1 |               |               |
|---------------------------|---------------|---------------|---------------|
| <b>TX Channel</b>         | <b>1312</b>   | <b>1413</b>   | <b>1513</b>   |
| <b>Rx Channel</b>         | <b>1537</b>   | <b>1638</b>   | <b>1738</b>   |
| <b>Frequency</b>          | <b>1712.4</b> | <b>1732.6</b> | <b>1752.6</b> |
| <b>RMC 12.2K</b>          | 23.60         | <b>23.64</b>  | 23.54         |
| <b>HSDPA Subtest-1</b>    | 22.74         | 22.78         | 22.71         |
| <b>HSDPA Subtest-2</b>    | 22.81         | 22.81         | 22.93         |
| <b>HSDPA Subtest-3</b>    | 22.24         | 22.33         | 22.22         |
| <b>HSDPA Subtest-4</b>    | 22.45         | 22.43         | 22.45         |
| <b>DC-HSDPA Subtest-1</b> | 22.69         | 22.71         | 22.62         |
| <b>DC-HSDPA Subtest-2</b> | 22.80         | 22.79         | 22.81         |
| <b>DC-HSDPA Subtest-3</b> | 22.08         | 22.12         | 22.15         |
| <b>DC-HSDPA Subtest-4</b> | 22.35         | 22.36         | 22.25         |
| <b>HSUPA Subtest-1</b>    | 20.64         | 20.62         | 20.66         |
| <b>HSUPA Subtest-2</b>    | 20.68         | 20.76         | 20.80         |
| <b>HSUPA Subtest-3</b>    | 21.58         | 21.42         | 21.49         |
| <b>HSUPA Subtest-4</b>    | 20.41         | 20.43         | 20.36         |
| <b>HSUPA Subtest-5</b>    | 21.82         | 21.66         | 21.74         |
| <b>HSPA+ Subtest-1</b>    | 22.23         | 22.23         | 22.21         |



| LTE Band 7 ANTO |            |         |           |                      |                    |                      |
|-----------------|------------|---------|-----------|----------------------|--------------------|----------------------|
| Band/BW         | Modulation | RB Size | RB offset | Low CH 20775         | Mid CH 21100       | High CH 21425        |
|                 |            |         |           | Frequency 2502.5 MHz | Frequency 2535 MHz | Frequency 2567.5 MHz |
| 7/ 5            | QPSK       | 1       | 0         | 23.95                | 23.90              | 23.71                |
|                 |            | 1       | 12        | 23.99                | 23.92              | 23.79                |
|                 |            | 1       | 24        | 23.76                | 23.75              | 23.51                |
|                 |            | 12      | 0         | 23.10                | 23.00              | 22.89                |
|                 |            | 12      | 6         | 23.08                | 23.12              | 22.79                |
|                 |            | 12      | 13        | 22.96                | 22.97              | 22.74                |
|                 |            | 25      | 0         | 23.06                | 22.94              | 22.85                |
|                 | 16QAM      | 1       | 0         | 23.21                | 23.07              | 22.93                |
|                 |            | 1       | 12        | 23.25                | 23.09              | 22.97                |
|                 |            | 1       | 24        | 22.98                | 22.88              | 23.77                |
|                 |            | 12      | 0         | 21.99                | 21.91              | 21.89                |
|                 |            | 12      | 6         | 22.05                | 22.29              | 21.62                |
|                 |            | 12      | 13        | 21.92                | 22.25              | 21.70                |
|                 |            | 25      | 0         | 22.07                | 22.37              | 21.73                |
|                 | 64QAM      | 1       | 0         | 22.11                | 22.48              | 21.99                |
|                 |            | 1       | 12        | 22.28                | 22.57              | 21.92                |
|                 |            | 1       | 24        | 21.94                | 22.26              | 21.69                |
|                 |            | 12      | 0         | 21.07                | 21.51              | 20.94                |
|                 |            | 12      | 6         | 21.24                | 21.51              | 20.95                |
|                 |            | 12      | 13        | 21.56                | 21.52              | 20.79                |
|                 |            | 25      | 0         | 21.10                | 21.55              | 20.88                |
| Band/BW         | Modulation | RB Size | RB offset | Low CH 20800         | Mid CH 21100       | High CH 21400        |
|                 |            |         |           | Frequency 2505 MHz   | Frequency 2535 MHz | Frequency 2565 MHz   |
| 7/ 10           | QPSK       | 1       | 0         | 23.92                | 23.88              | 23.68                |
|                 |            | 1       | 24        | 24.01                | 23.96              | 23.82                |
|                 |            | 1       | 49        | 23.74                | 23.69              | 23.51                |
|                 |            | 25      | 0         | 23.11                | 22.88              | 22.99                |
|                 |            | 25      | 12        | 23.09                | 23.05              | 22.84                |
|                 |            | 25      | 25        | 23.07                | 23.08              | 22.70                |
|                 |            | 50      | 0         | 23.05                | 22.97              | 22.86                |
|                 | 16QAM      | 1       | 0         | 23.16                | 23.15              | 22.98                |
|                 |            | 1       | 24        | 23.25                | 23.13              | 22.92                |
|                 |            | 1       | 49        | 22.90                | 22.88              | 23.77                |
|                 |            | 25      | 0         | 22.00                | 22.03              | 21.81                |
|                 |            | 25      | 12        | 22.04                | 22.22              | 21.60                |
|                 |            | 25      | 25        | 22.00                | 22.26              | 21.71                |
|                 |            | 50      | 0         | 22.00                | 22.40              | 21.73                |
|                 | 64QAM      | 1       | 0         | 22.07                | 22.53              | 21.91                |
|                 |            | 1       | 24        | 22.23                | 22.56              | 21.96                |
|                 |            | 1       | 49        | 21.98                | 22.25              | 21.61                |
|                 |            | 25      | 0         | 21.19                | 21.40              | 20.87                |
|                 |            | 25      | 12        | 21.15                | 21.56              | 20.90                |
|                 |            | 25      | 25        | 21.46                | 21.43              | 20.72                |
|                 |            | 50      | 0         | 21.13                | 21.48              | 20.81                |



| LTE Band 7 |            |         |           |                      |                    |                      |
|------------|------------|---------|-----------|----------------------|--------------------|----------------------|
| Band/BW    | Modulation | RB Size | RB offset | Low CH 20825         | Mid CH 21100       | High CH 21375        |
|            |            |         |           | Frequency 2507.5 MHz | Frequency 2535 MHz | Frequency 2562.5 MHz |
| 7/ 15      | QPSK       | 1       | 0         | 23.97                | 23.99              | 23.74                |
|            |            | 1       | 37        | 23.95                | 23.92              | 23.81                |
|            |            | 1       | 74        | 23.71                | 23.75              | 23.47                |
|            |            | 36      | 0         | 23.02                | 22.94              | 22.85                |
|            |            | 36      | 19        | 23.10                | 23.07              | 22.80                |
|            |            | 36      | 39        | 23.03                | 23.00              | 22.75                |
|            |            | 75      | 0         | 23.01                | 22.91              | 22.76                |
|            | 16QAM      | 1       | 0         | 23.13                | 23.09              | 22.98                |
|            |            | 1       | 37        | 23.28                | 23.10              | 23.01                |
|            |            | 1       | 74        | 22.97                | 22.97              | 23.76                |
|            |            | 36      | 0         | 22.04                | 21.93              | 21.88                |
|            |            | 36      | 19        | 22.13                | 22.22              | 21.64                |
|            |            | 36      | 39        | 22.04                | 22.26              | 21.67                |
|            |            | 75      | 0         | 21.97                | 22.33              | 21.81                |
|            | 64QAM      | 1       | 0         | 22.05                | 22.49              | 21.99                |
|            |            | 1       | 37        | 22.20                | 22.52              | 21.93                |
|            |            | 1       | 74        | 21.97                | 22.19              | 21.73                |
|            |            | 36      | 0         | 21.17                | 21.39              | 20.93                |
|            |            | 36      | 19        | 21.22                | 21.59              | 20.90                |
|            |            | 36      | 39        | 21.48                | 21.40              | 20.80                |
|            |            | 75      | 0         | 21.05                | 21.42              | 20.78                |
| Band/BW    | Modulation | RB Size | RB offset | Low CH 20850         | Mid CH 21100       | High CH 21350        |
|            |            |         |           | Frequency 2510 MHz   | Frequency 2535 MHz | Frequency 2560 MHz   |
| 7/ 20      | QPSK       | 1       | 0         | 24.05                | 24.00              | 23.80                |
|            |            | 1       | 50        | <b>24.10</b>         | 24.03              | 23.86                |
|            |            | 1       | 99        | 23.86                | 23.77              | 23.57                |
|            |            | 50      | 0         | 23.14                | 23.02              | 23.00                |
|            |            | 50      | 25        | <b>23.22</b>         | 23.16              | 23.05                |
|            |            | 50      | 50        | 23.11                | 23.10              | 22.77                |
|            |            | 100     | 0         | <b>23.13</b>         | 23.03              | 22.87                |
|            | 16QAM      | 1       | 0         | 23.25                | 23.16              | 23.01                |
|            |            | 1       | 50        | 23.37                | 23.24              | 23.04                |
|            |            | 1       | 99        | 23.05                | 23.02              | 23.78                |
|            |            | 50      | 0         | 22.14                | 22.04              | 21.96                |
|            |            | 50      | 25        | 22.17                | 22.37              | 21.74                |
|            |            | 50      | 50        | 22.07                | 22.39              | 21.79                |
|            |            | 100     | 0         | 22.08                | 22.41              | 21.83                |
|            | 64QAM      | 1       | 0         | 22.15                | 22.55              | 22.04                |
|            |            | 1       | 50        | 22.32                | 22.60              | 22.06                |
|            |            | 1       | 99        | 22.01                | 22.27              | 21.76                |
|            |            | 50      | 0         | 21.21                | 21.53              | 21.02                |
|            |            | 50      | 25        | 21.28                | 21.66              | 21.00                |
|            |            | 50      | 50        | 21.60                | 21.55              | 20.81                |
|            |            | 100     | 0         | 21.18                | 21.57              | 20.92                |



| LTE Band 7 ANT1 |            |         |           |                      |                    |                      |
|-----------------|------------|---------|-----------|----------------------|--------------------|----------------------|
| Band/BW         | Modulation | RB Size | RB offset | Low CH 20775         | Mid CH 21100       | High CH 21425        |
|                 |            |         |           | Frequency 2502.5 MHz | Frequency 2535 MHz | Frequency 2567.5 MHz |
| 7 / 5           | QPSK       | 1       | 0         | 23.51                | 23.55              | 23.08                |
|                 |            | 1       | 12        | 23.61                | 23.79              | 23.29                |
|                 |            | 1       | 24        | 23.42                | 23.41              | 22.59                |
|                 |            | 12      | 0         | 22.75                | 22.64              | 22.17                |
|                 |            | 12      | 6         | 22.68                | 22.84              | 22.05                |
|                 |            | 12      | 13        | 22.66                | 22.74              | 21.83                |
|                 |            | 25      | 0         | 22.49                | 22.68              | 22.06                |
|                 | 16QAM      | 1       | 0         | 22.68                | 22.65              | 22.16                |
|                 |            | 1       | 12        | 22.75                | 22.81              | 22.23                |
|                 |            | 1       | 24        | 22.36                | 22.60              | 21.83                |
|                 |            | 12      | 0         | 21.37                | 21.54              | 21.35                |
|                 |            | 12      | 6         | 21.55                | 21.73              | 21.14                |
|                 |            | 12      | 13        | 21.49                | 21.66              | 21.06                |
|                 |            | 25      | 0         | 21.50                | 21.63              | 21.36                |
|                 | 64QAM      | 1       | 0         | 21.64                | 21.64              | 21.72                |
|                 |            | 1       | 12        | 21.74                | 21.83              | 21.55                |
|                 |            | 1       | 24        | 21.57                | 21.59              | 21.23                |
|                 |            | 12      | 0         | 20.73                | 20.72              | 20.66                |
|                 |            | 12      | 6         | 20.68                | 20.75              | 20.57                |
|                 |            | 12      | 13        | 20.58                | 20.75              | 20.27                |
|                 |            | 25      | 0         | 20.71                | 20.63              | 20.44                |
| Band/BW         | Modulation | RB Size | RB offset | Low CH 20800         | Mid CH 21100       | High CH 21400        |
|                 |            |         |           | Frequency 2505 MHz   | Frequency 2535 MHz | Frequency 2565 MHz   |
| 7 / 10          | QPSK       | 1       | 0         | 23.53                | 23.56              | 23.20                |
|                 |            | 1       | 24        | 23.74                | 23.67              | 23.37                |
|                 |            | 1       | 49        | 23.35                | 23.33              | 22.60                |
|                 |            | 25      | 0         | 22.62                | 22.58              | 22.18                |
|                 |            | 25      | 12        | 22.63                | 22.74              | 21.96                |
|                 |            | 25      | 25        | 22.58                | 22.67              | 21.90                |
|                 |            | 50      | 0         | 22.44                | 22.61              | 22.00                |
|                 | 16QAM      | 1       | 0         | 22.61                | 22.76              | 22.26                |
|                 |            | 1       | 24        | 22.72                | 22.81              | 22.36                |
|                 |            | 1       | 49        | 22.35                | 22.64              | 21.85                |
|                 |            | 25      | 0         | 21.40                | 21.64              | 21.28                |
|                 |            | 25      | 12        | 21.59                | 21.73              | 21.10                |
|                 |            | 25      | 25        | 21.47                | 21.75              | 21.12                |
|                 |            | 50      | 0         | 21.53                | 21.63              | 21.38                |
|                 | 64QAM      | 1       | 0         | 21.70                | 21.74              | 21.74                |
|                 |            | 1       | 24        | 21.79                | 21.90              | 21.64                |
|                 |            | 1       | 49        | 21.57                | 21.62              | 21.30                |
|                 |            | 25      | 0         | 20.73                | 20.65              | 20.65                |
|                 |            | 25      | 12        | 20.65                | 20.73              | 20.56                |
|                 |            | 25      | 25        | 20.61                | 20.62              | 20.25                |
|                 |            | 50      | 0         | 20.73                | 20.64              | 20.46                |



| LTE Band 7 |            |         |           |                      |                    |                      |
|------------|------------|---------|-----------|----------------------|--------------------|----------------------|
| Band/BW    | Modulation | RB Size | RB offset | Low CH 20825         | Mid CH 21100       | High CH 21375        |
|            |            |         |           | Frequency 2507.5 MHz | Frequency 2535 MHz | Frequency 2562.5 MHz |
| 7/ 15      | QPSK       | 1       | 0         | 23.47                | 23.61              | 23.16                |
|            |            | 1       | 37        | 23.70                | 23.72              | 23.25                |
|            |            | 1       | 74        | 23.34                | 23.34              | 22.63                |
|            |            | 36      | 0         | 22.67                | 22.59              | 22.09                |
|            |            | 36      | 19        | 22.62                | 22.77              | 22.06                |
|            |            | 36      | 39        | 22.58                | 22.60              | 21.87                |
|            |            | 75      | 0         | 22.49                | 22.66              | 22.04                |
|            | 16QAM      | 1       | 0         | 22.60                | 22.73              | 22.21                |
|            |            | 1       | 37        | 22.62                | 22.85              | 22.29                |
|            |            | 1       | 74        | 22.34                | 22.69              | 21.79                |
|            |            | 36      | 0         | 21.49                | 21.65              | 21.23                |
|            |            | 36      | 19        | 21.60                | 21.75              | 21.19                |
|            |            | 36      | 39        | 21.46                | 21.66              | 21.07                |
|            |            | 75      | 0         | 21.49                | 21.52              | 21.37                |
|            | 64QAM      | 1       | 0         | 21.65                | 21.76              | 21.60                |
|            |            | 1       | 37        | 21.81                | 21.85              | 21.53                |
|            |            | 1       | 74        | 21.51                | 21.67              | 21.36                |
|            |            | 36      | 0         | 20.67                | 20.63              | 20.64                |
|            |            | 36      | 19        | 20.68                | 20.82              | 20.59                |
|            |            | 36      | 39        | 20.57                | 20.63              | 20.25                |
|            |            | 75      | 0         | 20.71                | 20.65              | 20.48                |
| Band/BW    | Modulation | RB Size | RB offset | Low CH 20850         | Mid CH 21100       | High CH 21350        |
|            |            |         |           | Frequency 2510 MHz   | Frequency 2535 MHz | Frequency 2560 MHz   |
| 7/ 20      | QPSK       | 1       | 0         | 23.60                | 23.68              | 23.21                |
|            |            | 1       | 50        | 23.75                | <b>23.81</b>       | 23.38                |
|            |            | 1       | 99        | 23.47                | 23.46              | 22.67                |
|            |            | 50      | 0         | 22.75                | 22.70              | 22.13                |
|            |            | 50      | 25        | 22.77                | <b>22.88</b>       | 22.19                |
|            |            | 50      | 50        | 22.69                | 22.75              | 21.92                |
|            |            | 100     | 0         | 22.59                | <b>22.76</b>       | 22.12                |
|            | 16QAM      | 1       | 0         | 22.73                | 22.78              | 22.30                |
|            |            | 1       | 50        | 22.76                | 22.91              | 22.38                |
|            |            | 1       | 99        | 22.49                | 22.75              | 21.91                |
|            |            | 50      | 0         | 21.50                | 21.67              | 21.37                |
|            |            | 50      | 25        | 21.67                | 21.83              | 21.24                |
|            |            | 50      | 50        | 21.61                | 21.76              | 21.16                |
|            |            | 100     | 0         | 21.63                | 21.66              | 21.39                |
|            | 64QAM      | 1       | 0         | 21.78                | 21.78              | 21.75                |
|            |            | 1       | 50        | 21.85                | 21.92              | 21.68                |
|            |            | 1       | 99        | 21.60                | 21.68              | 21.38                |
|            |            | 50      | 0         | 20.78                | 20.73              | 20.69                |
|            |            | 50      | 25        | 20.80                | 20.86              | 20.63                |
|            |            | 50      | 50        | 20.72                | 20.77              | 20.39                |
|            |            | 100     | 0         | 20.74                | 20.73              | 20.58                |



| LTE Band 12 ANTO |            |         |           |                     |                     |                     |
|------------------|------------|---------|-----------|---------------------|---------------------|---------------------|
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23017        | Mid CH 23095        | High CH 23173       |
|                  |            |         |           | Frequency 699.7 MHz | Frequency 707.5 MHz | Frequency 715.3 MHz |
| 12/ 1.4          | QPSK       | 1       | 0         | 24.79               | 24.68               | 24.73               |
|                  |            | 1       | 2         | 24.86               | 24.71               | 24.72               |
|                  |            | 1       | 5         | 24.55               | 24.47               | 24.61               |
|                  |            | 3       | 0         | 24.53               | 24.51               | 24.50               |
|                  |            | 3       | 1         | 24.62               | 24.49               | 24.58               |
|                  |            | 3       | 3         | 24.56               | 24.37               | 24.48               |
|                  |            | 6       | 0         | 23.79               | 23.56               | 23.66               |
|                  | 16QAM      | 1       | 0         | 23.44               | 23.28               | 23.39               |
|                  |            | 1       | 2         | 23.40               | 23.43               | 23.34               |
|                  |            | 1       | 5         | 23.38               | 23.19               | 23.30               |
|                  |            | 3       | 0         | 23.54               | 23.55               | 23.43               |
|                  |            | 3       | 1         | 23.64               | 23.52               | 23.66               |
|                  |            | 3       | 3         | 23.61               | 23.59               | 23.53               |
|                  |            | 6       | 0         | 22.74               | 22.69               | 22.64               |
|                  | 64QAM      | 1       | 0         | 23.16               | 23.07               | 22.96               |
|                  |            | 1       | 2         | 22.91               | 22.86               | 22.94               |
|                  |            | 1       | 5         | 23.03               | 22.98               | 22.78               |
|                  |            | 3       | 0         | 22.64               | 22.51               | 22.54               |
| 3                |            | 1       | 22.64     | 22.64               | 22.43               |                     |
| 3                |            | 3       | 22.45     | 22.51               | 22.54               |                     |
| 6                |            | 0       | 21.76     | 21.63               | 21.61               |                     |
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23025        | Mid CH 23095        | High CH 23165       |
|                  |            |         |           | Frequency 700.5 MHz | Frequency 707.5 MHz | Frequency 714.5 MHz |
| 12/ 3            | QPSK       | 1       | 0         | 24.79               | 24.80               | 24.63               |
|                  |            | 1       | 7         | 24.76               | 24.73               | 24.74               |
|                  |            | 1       | 14        | 24.65               | 24.44               | 24.59               |
|                  |            | 8       | 0         | 23.70               | 23.68               | 23.59               |
|                  |            | 8       | 3         | 23.88               | 23.75               | 23.79               |
|                  |            | 8       | 7         | 23.66               | 23.59               | 23.58               |
|                  |            | 15      | 0         | 23.68               | 23.55               | 23.66               |
|                  | 16QAM      | 1       | 0         | 23.37               | 23.31               | 23.33               |
|                  |            | 1       | 7         | 23.45               | 23.37               | 23.43               |
|                  |            | 1       | 14        | 23.35               | 23.25               | 23.29               |
|                  |            | 8       | 0         | 22.70               | 22.60               | 22.73               |
|                  |            | 8       | 3         | 22.81               | 22.63               | 22.85               |
|                  |            | 8       | 7         | 22.74               | 22.72               | 22.61               |
|                  |            | 15      | 0         | 22.67               | 22.76               | 22.62               |
|                  | 64QAM      | 1       | 0         | 23.13               | 23.05               | 23.03               |
|                  |            | 1       | 7         | 22.91               | 22.87               | 22.95               |
|                  |            | 1       | 14        | 22.90               | 22.92               | 22.77               |
|                  |            | 8       | 0         | 21.79               | 21.71               | 21.84               |
|                  |            | 8       | 3         | 21.82               | 21.75               | 21.71               |
|                  |            | 8       | 7         | 21.65               | 21.66               | 21.71               |
|                  |            | 15      | 0         | 21.78               | 21.63               | 21.67               |



| LTE Band 12 |            |         |           |                     |                     |                     |
|-------------|------------|---------|-----------|---------------------|---------------------|---------------------|
| Band/BW     | Modulation | RB Size | RB offset | Low CH 23035        | Mid CH 23095        | High CH 23155       |
|             |            |         |           | Frequency 701.5 MHz | Frequency 707.5 MHz | Frequency 713.5 MHz |
| 12/ 5       | QPSK       | 1       | 0         | 24.81               | 24.78               | 24.71               |
|             |            | 1       | 12        | 24.85               | 24.83               | 24.69               |
|             |            | 1       | 24        | 24.67               | 24.49               | 24.52               |
|             |            | 12      | 0         | 23.68               | 23.68               | 23.72               |
|             |            | 12      | 6         | 23.86               | 23.65               | 23.72               |
|             |            | 12      | 13        | 23.73               | 23.63               | 23.62               |
|             |            | 25      | 0         | 23.75               | 23.63               | 23.66               |
|             | 16QAM      | 1       | 0         | 23.39               | 23.30               | 23.33               |
|             |            | 1       | 12        | 23.48               | 23.42               | 23.37               |
|             |            | 1       | 24        | 23.28               | 23.17               | 23.23               |
|             |            | 12      | 0         | 22.69               | 22.64               | 22.72               |
|             |            | 12      | 6         | 22.86               | 22.67               | 22.76               |
|             |            | 12      | 13        | 22.75               | 22.74               | 22.60               |
|             |            | 25      | 0         | 22.79               | 22.67               | 22.65               |
|             | 64QAM      | 1       | 0         | 23.13               | 22.99               | 22.98               |
|             |            | 1       | 12        | 22.94               | 22.87               | 22.94               |
|             |            | 1       | 24        | 23.02               | 23.02               | 22.78               |
|             |            | 12      | 0         | 21.81               | 21.70               | 21.80               |
|             |            | 12      | 6         | 21.82               | 21.80               | 21.71               |
|             |            | 12      | 13        | 21.66               | 21.64               | 21.69               |
|             |            | 25      | 0         | 21.71               | 21.63               | 21.70               |
| Band/BW     | Modulation | RB Size | RB offset | Low CH 23060        | Mid CH 23095        | High CH 23130       |
|             |            |         |           | Frequency 704 MHz   | Frequency 707.5 MHz | Frequency 711 MHz   |
| 12/ 10      | QPSK       | 1       | 0         | 24.84               | 24.82               | 24.76               |
|             |            | 1       | 24        | <b>24.89</b>        | <b>24.84</b>        | <b>24.79</b>        |
|             |            | 1       | 49        | 24.70               | 24.58               | 24.66               |
|             |            | 25      | 0         | 23.83               | 23.78               | 23.73               |
|             |            | 25      | 12        | <b>23.89</b>        | <b>23.80</b>        | <b>23.85</b>        |
|             |            | 25      | 25        | 23.79               | 23.65               | 23.69               |
|             |            | 50      | 0         | <b>23.82</b>        | 23.70               | 23.76               |
|             | 16QAM      | 1       | 0         | 23.49               | 23.43               | 23.42               |
|             |            | 1       | 24        | 23.54               | 23.52               | 23.49               |
|             |            | 1       | 49        | 23.39               | 23.27               | 23.33               |
|             |            | 25      | 0         | 22.84               | 22.74               | 22.76               |
|             |            | 25      | 12        | 22.91               | 22.78               | 22.89               |
|             |            | 25      | 25        | 22.83               | 22.78               | 22.74               |
|             |            | 50      | 0         | 22.80               | 22.78               | 22.71               |
|             | 64QAM      | 1       | 0         | 23.19               | 23.10               | 23.08               |
|             |            | 1       | 24        | 23.01               | 22.92               | 22.98               |
|             |            | 1       | 49        | 23.05               | 23.04               | 22.90               |
|             |            | 25      | 0         | 21.86               | 21.72               | 21.85               |
|             |            | 25      | 12        | 21.89               | 21.85               | 21.74               |
|             |            | 25      | 25        | 21.76               | 21.71               | 21.73               |
|             |            | 50      | 0         | 21.83               | 21.69               | 21.75               |



| LTE Band 12 ANT1 |            |         |           |                     |                     |                     |
|------------------|------------|---------|-----------|---------------------|---------------------|---------------------|
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23017        | Mid CH 23095        | High CH 23173       |
|                  |            |         |           | Frequency 699.7 MHz | Frequency 707.5 MHz | Frequency 715.3 MHz |
| 12/ 1.4          | QPSK       | 1       | 0         | 24.80               | 24.86               | 24.90               |
|                  |            | 1       | 2         | 24.84               | 24.92               | 24.78               |
|                  |            | 1       | 5         | 24.62               | 24.72               | 24.67               |
|                  |            | 3       | 0         | 24.67               | 24.69               | 24.64               |
|                  |            | 3       | 1         | 24.67               | 24.73               | 24.65               |
|                  |            | 3       | 3         | 24.38               | 24.44               | 24.37               |
|                  |            | 6       | 0         | 23.76               | 23.91               | 23.82               |
|                  | 16QAM      | 1       | 0         | 23.90               | 23.93               | 23.91               |
|                  |            | 1       | 2         | 24.02               | 24.03               | 24.02               |
|                  |            | 1       | 5         | 23.71               | 23.75               | 23.75               |
|                  |            | 3       | 0         | 23.61               | 23.65               | 23.64               |
|                  |            | 3       | 1         | 23.62               | 23.69               | 23.61               |
|                  |            | 3       | 3         | 23.35               | 23.41               | 23.37               |
|                  |            | 6       | 0         | 22.63               | 22.74               | 22.65               |
|                  | 64QAM      | 1       | 0         | 22.81               | 22.91               | 22.82               |
|                  |            | 1       | 2         | 23.00               | 22.98               | 23.00               |
|                  |            | 1       | 5         | 22.82               | 22.80               | 22.65               |
|                  |            | 3       | 0         | 22.67               | 22.58               | 22.58               |
|                  |            | 3       | 1         | 22.61               | 22.68               | 22.72               |
|                  |            | 3       | 3         | 22.48               | 22.50               | 22.60               |
|                  |            | 6       | 0         | 21.59               | 21.70               | 21.68               |
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23025        | Mid CH 23095        | High CH 23165       |
|                  |            |         |           | Frequency 700.5 MHz | Frequency 707.5 MHz | Frequency 714.5 MHz |
| 12/ 3            | QPSK       | 1       | 0         | 24.86               | 24.90               | 24.84               |
|                  |            | 1       | 7         | 24.90               | 24.94               | 24.77               |
|                  |            | 1       | 14        | 24.65               | 24.75               | 24.68               |
|                  |            | 8       | 0         | 23.90               | 23.89               | 23.82               |
|                  |            | 8       | 3         | 23.80               | 23.96               | 23.88               |
|                  |            | 8       | 7         | 23.51               | 23.67               | 23.60               |
|                  |            | 15      | 0         | 23.71               | 23.82               | 23.85               |
|                  | 16QAM      | 1       | 0         | 23.83               | 23.86               | 23.81               |
|                  |            | 1       | 7         | 23.96               | 24.12               | 23.96               |
|                  |            | 1       | 14        | 23.66               | 23.83               | 23.71               |
|                  |            | 8       | 0         | 22.75               | 22.87               | 22.75               |
|                  |            | 8       | 3         | 22.83               | 22.87               | 22.74               |
|                  |            | 8       | 7         | 22.49               | 22.70               | 22.57               |
|                  |            | 15      | 0         | 22.64               | 22.78               | 22.64               |
|                  | 64QAM      | 1       | 0         | 22.73               | 22.83               | 22.89               |
|                  |            | 1       | 7         | 22.86               | 23.03               | 22.98               |
|                  |            | 1       | 14        | 22.76               | 22.79               | 22.66               |
|                  |            | 8       | 0         | 21.88               | 21.87               | 21.73               |
|                  |            | 8       | 3         | 21.79               | 21.89               | 21.89               |
|                  |            | 8       | 7         | 21.61               | 21.75               | 21.69               |
|                  |            | 15      | 0         | 21.58               | 21.82               | 21.68               |



| LTE Band 12 |            |         |           |                     |                     |                     |
|-------------|------------|---------|-----------|---------------------|---------------------|---------------------|
| Band/BW     | Modulation | RB Size | RB offset | Low CH 23035        | Mid CH 23095        | High CH 23155       |
|             |            |         |           | Frequency 701.5 MHz | Frequency 707.5 MHz | Frequency 713.5 MHz |
| 12/ 5       | QPSK       | 1       | 0         | 24.84               | 24.92               | 24.90               |
|             |            | 1       | 12        | 24.93               | 24.92               | 24.79               |
|             |            | 1       | 24        | 24.70               | 24.71               | 24.66               |
|             |            | 12      | 0         | 23.88               | 23.95               | 23.94               |
|             |            | 12      | 6         | 23.78               | 23.94               | 23.87               |
|             |            | 12      | 13        | 23.57               | 23.70               | 23.58               |
|             |            | 25      | 0         | 23.76               | 23.89               | 23.80               |
|             | 16QAM      | 1       | 0         | 23.77               | 23.85               | 23.83               |
|             |            | 1       | 12        | 23.92               | 24.07               | 23.97               |
|             |            | 1       | 24        | 23.69               | 23.88               | 23.68               |
|             |            | 12      | 0         | 22.77               | 22.82               | 22.72               |
|             |            | 12      | 6         | 22.75               | 22.93               | 22.73               |
|             |            | 12      | 13        | 22.58               | 22.72               | 22.47               |
|             |            | 25      | 0         | 22.59               | 22.75               | 22.59               |
|             | 64QAM      | 1       | 0         | 22.81               | 22.86               | 22.86               |
|             |            | 1       | 12        | 22.96               | 23.04               | 23.02               |
|             |            | 1       | 24        | 22.83               | 22.75               | 22.72               |
|             |            | 12      | 0         | 21.78               | 21.84               | 21.71               |
|             |            | 12      | 6         | 21.73               | 21.96               | 21.87               |
|             |            | 12      | 13        | 21.70               | 21.80               | 21.68               |
|             |            | 25      | 0         | 21.64               | 21.80               | 21.73               |
| Band/BW     | Modulation | RB Size | RB offset | Low CH 23060        | Mid CH 23095        | High CH 23130       |
|             |            |         |           | Frequency 704 MHz   | Frequency 707.5 MHz | Frequency 711 MHz   |
| 12/ 10      | QPSK       | 1       | 0         | 24.95               | 24.93               | 24.91               |
|             |            | 1       | 24        | <b>24.96</b>        | <b>24.98</b>        | <b>24.92</b>        |
|             |            | 1       | 49        | 24.76               | 24.84               | 24.79               |
|             |            | 25      | 0         | <b>23.93</b>        | <b>24.01</b>        | <b>23.95</b>        |
|             |            | 25      | 12        | 23.90               | 23.99               | 23.94               |
|             |            | 25      | 25        | 23.62               | 23.74               | 23.69               |
|             |            | 50      | 0         | 23.86               | <b>23.96</b>        | 23.87               |
|             | 16QAM      | 1       | 0         | 23.92               | 23.95               | 23.92               |
|             |            | 1       | 24        | 24.05               | 24.18               | 24.05               |
|             |            | 1       | 49        | 23.81               | 23.90               | 23.77               |
|             |            | 25      | 0         | 22.83               | 22.91               | 22.84               |
|             |            | 25      | 12        | 22.86               | 22.99               | 22.87               |
|             |            | 25      | 25        | 22.62               | 22.74               | 22.61               |
|             |            | 50      | 0         | 22.74               | 22.82               | 22.71               |
|             | 64QAM      | 1       | 0         | 22.86               | 22.96               | 22.93               |
|             |            | 1       | 24        | 23.01               | 23.07               | 23.06               |
|             |            | 1       | 49        | 22.87               | 22.90               | 22.80               |
|             |            | 25      | 0         | 21.90               | 21.91               | 21.77               |
|             |            | 25      | 12        | 21.85               | 21.99               | 21.96               |
|             |            | 25      | 25        | 21.72               | 21.83               | 21.81               |
|             |            | 50      | 0         | 21.71               | 21.84               | 21.77               |



| LTE Band 13 ANT0 |            |         |           |                     |                     |                     |
|------------------|------------|---------|-----------|---------------------|---------------------|---------------------|
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23205        | Mid CH 23230        | High CH 23255       |
|                  |            |         |           | Frequency 779.5 MHz | Frequency 782.0 MHz | Frequency 784.5 MHz |
| 13/ 5            | QPSK       | 1       | 0         | 24.69               | 24.65               | 24.63               |
|                  |            | 1       | 12        | 24.73               | 24.70               | 24.72               |
|                  |            | 1       | 24        | 24.63               | 24.58               | 24.60               |
|                  |            | 12      | 0         | 23.70               | 23.60               | 23.71               |
|                  |            | 12      | 6         | 23.78               | 23.70               | 23.77               |
|                  |            | 12      | 13        | 23.69               | 23.61               | 23.66               |
|                  |            | 25      | 0         | 23.71               | 23.65               | 23.72               |
|                  | 16QAM      | 1       | 0         | 23.35               | 23.34               | 23.39               |
|                  |            | 1       | 12        | 23.40               | 23.42               | 23.45               |
|                  |            | 1       | 24        | 23.31               | 23.28               | 23.33               |
|                  |            | 12      | 0         | 22.73               | 22.69               | 22.75               |
|                  |            | 12      | 6         | 22.75               | 22.77               | 22.69               |
|                  |            | 12      | 13        | 22.60               | 22.63               | 22.61               |
|                  |            | 25      | 0         | 22.68               | 22.65               | 22.66               |
|                  | 64QAM      | 1       | 0         | 22.81               | 22.80               | 22.78               |
|                  |            | 1       | 12        | 22.83               | 22.85               | 22.81               |
|                  |            | 1       | 24        | 22.82               | 22.84               | 22.85               |
|                  |            | 12      | 0         | 21.76               | 21.70               | 21.69               |
|                  |            | 12      | 6         | 21.75               | 21.72               | 21.73               |
|                  |            | 12      | 13        | 21.64               | 21.61               | 21.65               |
|                  |            | 25      | 0         | 21.63               | 21.62               | 21.64               |
| Band/BW          | Modulation | RB Size | RB offset | /                   | Mid CH 23230        | /                   |
|                  |            |         |           | /                   | Frequency 782.0 MHz | /                   |
| 13/ 10           | QPSK       | 1       | 0         | /                   | 24.71               | /                   |
|                  |            | 1       | 24        | /                   | <b>24.74</b>        | /                   |
|                  |            | 1       | 49        | /                   | 24.62               | /                   |
|                  |            | 25      | 0         | /                   | 23.66               | /                   |
|                  |            | 25      | 12        | /                   | <b>23.76</b>        | /                   |
|                  |            | 25      | 25        | /                   | 23.66               | /                   |
|                  |            | 50      | 0         | /                   | <b>23.70</b>        | /                   |
|                  | 16QAM      | 1       | 0         | /                   | 23.39               | /                   |
|                  |            | 1       | 24        | /                   | 23.47               | /                   |
|                  |            | 1       | 49        | /                   | 23.33               | /                   |
|                  |            | 25      | 0         | /                   | 22.73               | /                   |
|                  |            | 25      | 12        | /                   | 22.82               | /                   |
|                  |            | 25      | 25        | /                   | 22.68               | /                   |
|                  |            | 50      | 0         | /                   | 22.71               | /                   |
|                  | 64QAM      | 1       | 0         | /                   | 22.90               | /                   |
|                  |            | 1       | 24        | /                   | 22.91               | /                   |
|                  |            | 1       | 49        | /                   | 22.92               | /                   |
|                  |            | 25      | 0         | /                   | 21.74               | /                   |
|                  |            | 25      | 12        | /                   | 21.79               | /                   |
|                  |            | 25      | 25        | /                   | 21.67               | /                   |
|                  |            | 50      | 0         | /                   | 21.68               | /                   |



| LTE Band 13 ANT1 |            |         |           |                     |                     |                     |
|------------------|------------|---------|-----------|---------------------|---------------------|---------------------|
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23205        | Mid CH 23230        | High CH 23255       |
|                  |            |         |           | Frequency 779.5 MHz | Frequency 782.0 MHz | Frequency 784.5 MHz |
| 13/ 5            | QPSK       | 1       | 0         | 24.27               | 24.38               | 24.22               |
|                  |            | 1       | 12        | 24.33               | 24.43               | 24.29               |
|                  |            | 1       | 24        | 24.20               | 24.31               | 24.15               |
|                  |            | 12      | 0         | 23.31               | 23.30               | 23.36               |
|                  |            | 12      | 6         | 23.38               | 23.35               | 23.32               |
|                  |            | 12      | 13        | 23.28               | 23.39               | 23.24               |
|                  |            | 25      | 0         | 23.30               | 23.29               | 23.27               |
|                  | 16QAM      | 1       | 0         | 23.41               | 23.47               | 23.40               |
|                  |            | 1       | 12        | 23.48               | 23.57               | 23.48               |
|                  |            | 1       | 24        | 23.35               | 23.38               | 23.33               |
|                  |            | 12      | 0         | 22.30               | 22.29               | 22.28               |
|                  |            | 12      | 6         | 22.32               | 22.36               | 22.31               |
|                  |            | 12      | 13        | 22.29               | 22.30               | 22.36               |
|                  |            | 25      | 0         | 22.27               | 22.31               | 22.32               |
|                  | 64QAM      | 1       | 0         | 22.40               | 22.45               | 22.41               |
|                  |            | 1       | 12        | 22.47               | 22.53               | 22.50               |
|                  |            | 1       | 24        | 22.31               | 22.35               | 22.30               |
|                  |            | 12      | 0         | 21.31               | 21.30               | 21.32               |
|                  |            | 12      | 6         | 21.35               | 21.39               | 21.40               |
|                  |            | 12      | 13        | 21.32               | 21.33               | 21.35               |
|                  |            | 25      | 0         | 21.37               | 21.34               | 21.36               |
| Band/BW          | Modulation | RB Size | RB offset | /                   | Mid CH 23230        | /                   |
|                  |            |         |           | /                   | Frequency 782.0 MHz | /                   |
| 13/ 10           | QPSK       | 1       | 0         | /                   | 24.70               | /                   |
|                  |            | 1       | 24        | /                   | <b>24.77</b>        | /                   |
|                  |            | 1       | 49        | /                   | 24.59               | /                   |
|                  |            | 25      | 0         | /                   | 23.65               | /                   |
|                  |            | 25      | 12        | /                   | <b>23.76</b>        | /                   |
|                  |            | 25      | 25        | /                   | 23.64               | /                   |
|                  |            | 50      | 0         | /                   | <b>23.66</b>        | /                   |
|                  | 16QAM      | 1       | 0         | /                   | 23.77               | /                   |
|                  |            | 1       | 24        | /                   | 23.81               | /                   |
|                  |            | 1       | 49        | /                   | 23.48               | /                   |
|                  |            | 25      | 0         | /                   | 22.67               | /                   |
|                  |            | 25      | 12        | /                   | 22.66               | /                   |
|                  |            | 25      | 25        | /                   | 22.50               | /                   |
|                  |            | 50      | 0         | /                   | 22.46               | /                   |
|                  | 64QAM      | 1       | 0         | /                   | 22.83               | /                   |
|                  |            | 1       | 24        | /                   | 22.96               | /                   |
|                  |            | 1       | 49        | /                   | 22.64               | /                   |
|                  |            | 25      | 0         | /                   | 21.61               | /                   |
|                  |            | 25      | 12        | /                   | 21.78               | /                   |
|                  |            | 25      | 25        | /                   | 21.69               | /                   |
|                  |            | 50      | 0         | /                   | 21.58               | /                   |



| LTE Band 17 ANT0 |            |         |           |                     |                   |                     |
|------------------|------------|---------|-----------|---------------------|-------------------|---------------------|
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23755        | Mid CH 23790      | High CH 23825       |
|                  |            |         |           | Frequency 706.5 MHz | Frequency 710 MHz | Frequency 713.5 MHz |
| 17/ 5            | QPSK       | 1       | 0         | 24.63               | 24.71             | 24.67               |
|                  |            | 1       | 12        | 24.64               | 24.77             | 24.73               |
|                  |            | 1       | 24        | 24.53               | 24.61             | 24.51               |
|                  |            | 12      | 0         | 23.55               | 23.71             | 23.55               |
|                  |            | 12      | 6         | 23.75               | 23.87             | 23.73               |
|                  |            | 12      | 13        | 23.56               | 23.74             | 23.58               |
|                  |            | 25      | 0         | 23.76               | 23.72             | 23.73               |
|                  | 16QAM      | 1       | 0         | 23.88               | 23.84             | 23.87               |
|                  |            | 1       | 12        | 23.93               | 24.05             | 23.92               |
|                  |            | 1       | 24        | 23.68               | 23.75             | 23.70               |
|                  |            | 12      | 0         | 22.81               | 22.73             | 22.67               |
|                  |            | 12      | 6         | 22.67               | 22.84             | 22.78               |
|                  |            | 12      | 13        | 22.71               | 22.68             | 22.69               |
|                  |            | 25      | 0         | 22.57               | 22.73             | 22.67               |
|                  | 64QAM      | 1       | 0         | 22.86               | 22.88             | 22.84               |
|                  |            | 1       | 12        | 22.86               | 23.01             | 22.91               |
|                  |            | 1       | 24        | 22.78               | 22.77             | 22.58               |
|                  |            | 12      | 0         | 21.76               | 21.80             | 21.70               |
|                  |            | 12      | 6         | 21.78               | 21.80             | 21.73               |
|                  |            | 12      | 13        | 21.74               | 21.86             | 21.81               |
|                  |            | 25      | 0         | 21.63               | 21.76             | 21.64               |
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23780        | Mid CH 23790      | High CH 23800       |
|                  |            |         |           | Frequency 709 MHz   | Frequency 710 MHz | Frequency 711 MHz   |
| 17/ 10           | QPSK       | 1       | 0         | 24.75               | 24.83             | 24.76               |
|                  |            | 1       | 24        | <b>24.79</b>        | <b>24.88</b>      | <b>24.80</b>        |
|                  |            | 1       | 49        | 24.57               | 24.71             | 24.62               |
|                  |            | 25      | 0         | 23.70               | 23.81             | 23.70               |
|                  |            | 25      | 12        | <b>23.79</b>        | <b>23.88</b>      | <b>23.83</b>        |
|                  |            | 25      | 25        | 23.66               | 23.76             | 23.72               |
|                  |            | 50      | 0         | 23.82               | <b>23.84</b>      | 23.81               |
|                  | 16QAM      | 1       | 0         | 23.95               | 23.98             | 23.91               |
|                  |            | 1       | 24        | 24.07               | 24.08             | 24.01               |
|                  |            | 1       | 49        | 23.71               | 23.81             | 23.76               |
|                  |            | 25      | 0         | 22.85               | 22.88             | 22.78               |
|                  |            | 25      | 12        | 22.81               | 22.94             | 22.82               |
|                  |            | 25      | 25        | 22.74               | 22.83             | 22.76               |
|                  |            | 50      | 0         | 22.72               | 22.85             | 22.81               |
|                  | 64QAM      | 1       | 0         | 22.94               | 23.01             | 22.97               |
|                  |            | 1       | 24        | 22.96               | 23.06             | 22.93               |
|                  |            | 1       | 49        | 22.81               | 22.83             | 22.68               |
|                  |            | 25      | 0         | 21.84               | 21.87             | 21.80               |
|                  |            | 25      | 12        | 21.79               | 21.94             | 21.87               |
|                  |            | 25      | 25        | 21.84               | 21.91             | 21.84               |
|                  |            | 50      | 0         | 21.73               | 21.83             | 21.71               |



| LTE Band 17 ANT1 |            |         |           |                     |                   |                     |
|------------------|------------|---------|-----------|---------------------|-------------------|---------------------|
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23755        | Mid CH 23790      | High CH 23825       |
|                  |            |         |           | Frequency 706.5 MHz | Frequency 710 MHz | Frequency 713.5 MHz |
| 17/ 5            | QPSK       | 1       | 0         | 24.78               | 24.82             | 24.78               |
|                  |            | 1       | 12        | 24.92               | 24.85             | 24.80               |
|                  |            | 1       | 24        | 24.62               | 24.75             | 24.80               |
|                  |            | 12      | 0         | 23.63               | 23.74             | 23.71               |
|                  |            | 12      | 6         | 23.91               | 23.97             | 23.90               |
|                  |            | 12      | 13        | 23.72               | 23.69             | 23.58               |
|                  |            | 25      | 0         | 23.87               | 23.80             | 23.67               |
|                  | 16QAM      | 1       | 0         | 23.47               | 23.62             | 23.53               |
|                  |            | 1       | 12        | 23.98               | 24.14             | 24.06               |
|                  |            | 1       | 24        | 23.81               | 23.81             | 23.85               |
|                  |            | 12      | 0         | 22.94               | 22.97             | 22.80               |
|                  |            | 12      | 6         | 22.84               | 23.04             | 22.86               |
|                  |            | 12      | 13        | 22.79               | 22.76             | 22.66               |
|                  |            | 25      | 0         | 22.74               | 22.75             | 22.80               |
|                  | 64QAM      | 1       | 0         | 22.91               | 22.98             | 22.81               |
|                  |            | 1       | 12        | 23.03               | 23.08             | 22.98               |
|                  |            | 1       | 24        | 22.79               | 22.94             | 22.81               |
|                  |            | 12      | 0         | 21.90               | 22.02             | 21.86               |
|                  |            | 12      | 6         | 21.89               | 21.83             | 21.76               |
|                  |            | 12      | 13        | 21.82               | 21.91             | 21.79               |
|                  |            | 25      | 0         | 21.71               | 21.87             | 21.65               |
| Band/BW          | Modulation | RB Size | RB offset | Low CH 23780        | Mid CH 23790      | High CH 23800       |
|                  |            |         |           | Frequency 709 MHz   | Frequency 710 MHz | Frequency 711 MHz   |
| 17/ 10           | QPSK       | 1       | 0         | 24.84               | 24.92             | 24.85               |
|                  |            | 1       | 24        | <b>24.93</b>        | <b>24.97</b>      | <b>24.87</b>        |
|                  |            | 1       | 49        | 24.69               | 24.83             | 24.82               |
|                  |            | 25      | 0         | 23.76               | 23.89             | 23.74               |
|                  |            | 25      | 12        | <b>23.92</b>        | <b>24.01</b>      | <b>23.92</b>        |
|                  |            | 25      | 25        | 23.79               | 23.84             | 23.71               |
|                  |            | 50      | 0         | 23.90               | <b>23.91</b>      | 23.76               |
|                  | 16QAM      | 1       | 0         | 23.62               | 23.71             | 23.63               |
|                  |            | 1       | 24        | 24.07               | 24.19             | 24.12               |
|                  |            | 1       | 49        | 23.91               | 23.95             | 23.92               |
|                  |            | 25      | 0         | 22.98               | 23.02             | 22.92               |
|                  |            | 25      | 12        | 22.91               | 23.05             | 22.90               |
|                  |            | 25      | 25        | 22.81               | 22.87             | 22.79               |
|                  |            | 50      | 0         | 22.84               | 22.87             | 22.81               |
|                  | 64QAM      | 1       | 0         | 22.99               | 23.04             | 22.92               |
|                  |            | 1       | 24        | 23.17               | 23.21             | 23.12               |
|                  |            | 1       | 49        | 22.86               | 22.97             | 22.96               |
|                  |            | 25      | 0         | 21.94               | 22.04             | 22.00               |
|                  |            | 25      | 12        | 21.95               | 21.96             | 21.82               |
|                  |            | 25      | 25        | 21.83               | 21.97             | 21.91               |
|                  |            | 50      | 0         | 21.82               | 21.91             | 21.79               |



| EIRP          |                 |                       |                                     |            |           |           |
|---------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| WCDMA IV ANT0 |                 |                       |                                     |            |           |           |
| Channel       | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 1312          | 1712.4          | 23.93                 | -2.4                                | 21.53      | 142.23    | 2         |
| 1413          | 1732.6          | 24.01                 | -2.4                                | 21.61      | 144.88    | 2         |
| 1513          | 1752.6          | 23.99                 | -2.4                                | 21.59      | 144.21    | 2         |

| WCDMA IV ANT1 |                 |                       |                                     |            |           |           |
|---------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel       | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 1312          | 1712.4          | 23.60                 | -0.5                                | 23.10      | 204.17    | 2         |
| 1413          | 1732.6          | 23.64                 | -0.5                                | 23.14      | 206.06    | 2         |
| 1513          | 1752.6          | 23.54                 | -0.5                                | 23.04      | 201.37    | 2         |

| LTE BAND 7 ANT0 |                 |                       |                                     |            |           |           |
|-----------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 5MHz QPSK       |                 |                       |                                     |            |           |           |
| Channel         | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20775           | 2502.5          | 23.99                 | -1.7                                | 22.29      | 169.43    | 2         |
| 21100           | 2535            | 23.92                 | -1.7                                | 22.22      | 166.72    | 2         |
| 21425           | 2567.5          | 23.79                 | -1.7                                | 22.09      | 161.81    | 2         |

| 5MHz 16QAM |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20775      | 2502.5          | 23.25                 | -1.7                                | 21.55      | 142.89    | 2         |
| 21100      | 2535            | 23.09                 | -1.7                                | 21.39      | 137.72    | 2         |
| 21425      | 2567.5          | 23.77                 | -1.7                                | 22.07      | 161.06    | 2         |

| 5MHz 64QAM |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20775      | 2502.5          | 22.28                 | -1.7                                | 20.58      | 114.29    | 2         |
| 21100      | 2535            | 22.57                 | -1.7                                | 20.87      | 122.18    | 2         |
| 21425      | 2567.5          | 21.99                 | -1.7                                | 20.29      | 106.91    | 2         |

| 10MHz QPSK |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20800      | 2505            | 24.01                 | -1.7                                | 22.31      | 170.22    | 2         |
| 21100      | 2535            | 23.96                 | -1.7                                | 22.26      | 168.27    | 2         |
| 21400      | 2565            | 23.82                 | -1.7                                | 22.12      | 162.93    | 2         |



| 10MHz 16QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20800       | 2505            | 23.25                 | -1.7                                | 21.55      | 142.89    | 2         |
| 21100       | 2535            | 23.15                 | -1.7                                | 21.45      | 139.64    | 2         |
| 21400       | 2565            | 23.77                 | -1.7                                | 22.07      | 161.06    | 2         |

| 10MHz 64QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20800       | 2505            | 22.23                 | -1.7                                | 20.53      | 112.98    | 2         |
| 21100       | 2535            | 22.56                 | -1.7                                | 20.86      | 121.90    | 2         |
| 21400       | 2565            | 21.96                 | -1.7                                | 20.26      | 106.17    | 2         |

| 15MHz QPSK |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20825      | 2507.5          | 23.97                 | -1.7                                | 22.27      | 168.66    | 2         |
| 21100      | 2535            | 23.99                 | -1.7                                | 22.29      | 169.43    | 2         |
| 21375      | 2562.5          | 23.81                 | -1.7                                | 22.11      | 162.55    | 2         |

| 15MHz 16QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20825       | 2507.5          | 23.28                 | -1.7                                | 21.58      | 143.88    | 2         |
| 21100       | 2535            | 23.10                 | -1.7                                | 21.40      | 138.04    | 2         |
| 21375       | 2562.5          | 23.76                 | -1.7                                | 22.06      | 160.69    | 2         |

| 15MHz 64QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20825       | 2507.5          | 22.20                 | -1.7                                | 20.50      | 112.20    | 2         |
| 21100       | 2535            | 22.52                 | -1.7                                | 20.82      | 120.78    | 2         |
| 21375       | 2562.5          | 21.99                 | -1.7                                | 20.29      | 106.91    | 2         |

| 20MHz QPSK |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20850      | 2510            | 24.10                 | -1.7                                | 22.40      | 173.78    | 2         |
| 21100      | 2535            | 24.03                 | -1.7                                | 22.33      | 171.00    | 2         |
| 21350      | 2560            | 23.86                 | -1.7                                | 22.16      | 164.44    | 2         |



| 20MHz 16QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20850       | 2510            | 23.37                 | -1.7                                | 21.67      | 146.89    | 2         |
| 21100       | 2535            | 23.24                 | -1.7                                | 21.54      | 142.56    | 2         |
| 21350       | 2560            | 23.78                 | -1.7                                | 22.08      | 161.44    | 2         |

| 20MHz 64QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20850       | 2510            | 22.32                 | -1.7                                | 20.62      | 115.35    | 2         |
| 21100       | 2535            | 22.60                 | -1.7                                | 20.90      | 123.03    | 2         |
| 21350       | 2560            | 22.06                 | -1.7                                | 20.36      | 108.64    | 2         |

| LTE BAND 7 ANT1 |                 |                       |                                     |            |           |           |
|-----------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 5MHz QPSK       |                 |                       |                                     |            |           |           |
| Channel         | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20775           | 2502.5          | 23.61                 | -2.1                                | 21.51      | 141.58    | 2         |
| 21100           | 2535            | 23.79                 | -2.1                                | 21.69      | 147.57    | 2         |
| 21425           | 2567.5          | 23.29                 | -2.1                                | 21.19      | 131.52    | 2         |

| 5MHz 16QAM |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20775      | 2502.5          | 22.75                 | -2.1                                | 20.65      | 116.14    | 2         |
| 21100      | 2535            | 22.81                 | -2.1                                | 20.71      | 117.76    | 2         |
| 21425      | 2567.5          | 22.23                 | -2.1                                | 20.13      | 103.04    | 2         |

| 5MHz 64QAM |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20775      | 2502.5          | 21.74                 | -2.1                                | 19.64      | 92.04     | 2         |
| 21100      | 2535            | 21.83                 | -2.1                                | 19.73      | 93.97     | 2         |
| 21425      | 2567.5          | 21.72                 | -2.1                                | 19.62      | 91.62     | 2         |

| 10MHz QPSK |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20800      | 2505            | 23.74                 | -2.1                                | 21.64      | 145.88    | 2         |
| 21100      | 2535            | 23.67                 | -2.1                                | 21.57      | 143.55    | 2         |
| 21400      | 2565            | 23.37                 | -2.1                                | 21.27      | 133.97    | 2         |



| 10MHz 16QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20800       | 2505            | 22.72                 | -2.1                                | 20.62      | 115.35    | 2         |
| 21100       | 2535            | 22.81                 | -2.1                                | 20.71      | 117.76    | 2         |
| 21400       | 2565            | 22.36                 | -2.1                                | 20.26      | 106.17    | 2         |

| 10MHz 64QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20800       | 2505            | 21.79                 | -2.1                                | 19.69      | 93.11     | 2         |
| 21100       | 2535            | 21.90                 | -2.1                                | 19.80      | 95.50     | 2         |
| 21400       | 2565            | 21.74                 | -2.1                                | 19.64      | 92.04     | 2         |

| 15MHz QPSK |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20825      | 2507.5          | 23.70                 | -2.1                                | 21.60      | 144.54    | 2         |
| 21100      | 2535            | 23.72                 | -2.1                                | 21.62      | 145.21    | 2         |
| 21375      | 2562.5          | 23.25                 | -2.1                                | 21.15      | 130.32    | 2         |

| 15MHz 16QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20825       | 2507.5          | 22.62                 | -2.1                                | 20.52      | 112.72    | 2         |
| 21100       | 2535            | 22.85                 | -2.1                                | 20.75      | 118.85    | 2         |
| 21375       | 2562.5          | 22.29                 | -2.1                                | 20.19      | 104.47    | 2         |

| 15MHz 64QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20825       | 2507.5          | 21.81                 | -2.1                                | 19.71      | 93.54     | 2         |
| 21100       | 2535            | 21.85                 | -2.1                                | 19.75      | 94.41     | 2         |
| 21375       | 2562.5          | 21.60                 | -2.1                                | 19.50      | 89.13     | 2         |

| 20MHz QPSK |                 |                       |                                     |            |           |           |
|------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20850      | 2510            | 23.75                 | -2.1                                | 21.65      | 146.22    | 2         |
| 21100      | 2535            | 23.81                 | -2.1                                | 21.71      | 148.25    | 2         |
| 21350      | 2560            | 23.38                 | -2.1                                | 21.28      | 134.28    | 2         |



| 20MHz 16QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20850       | 2510            | 22.76                 | -2.1                                | 20.66      | 116.41    | 2         |
| 21100       | 2535            | 22.91                 | -2.1                                | 20.81      | 120.50    | 2         |
| 21350       | 2560            | 22.38                 | -2.1                                | 20.28      | 106.66    | 2         |

| 20MHz 64QAM |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 20850       | 2510            | 21.85                 | -2.1                                | 19.75      | 94.41     | 2         |
| 21100       | 2535            | 21.92                 | -2.1                                | 19.82      | 95.94     | 2         |
| 21350       | 2560            | 21.75                 | -2.1                                | 19.65      | 92.26     | 2         |



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| 1.4MHz QPSK |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23017       | 699.7           | 24.86                 | -5                                  | 17.71     | 59.02    | 3         |
| 23095       | 707.5           | 24.71                 | -5                                  | 17.56     | 57.02    | 3         |
| 23173       | 715.3           | 24.73                 | -5                                  | 17.58     | 57.28    | 3         |

| 1.4MHz 16QAM |                 |                       |                                     |           |          |           |
|--------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel      | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23017        | 699.7           | 23.64                 | -5                                  | 16.49     | 44.57    | 3         |
| 23095        | 707.5           | 23.59                 | -5                                  | 16.44     | 44.06    | 3         |
| 23173        | 715.3           | 23.66                 | -5                                  | 16.51     | 44.77    | 3         |

| 1.4MHz 64QAM |                 |                       |                                     |           |          |           |
|--------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel      | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23017        | 699.7           | 23.16                 | -5                                  | 16.01     | 39.90    | 3         |
| 23095        | 707.5           | 23.07                 | -5                                  | 15.92     | 39.08    | 3         |
| 23173        | 715.3           | 22.96                 | -5                                  | 15.81     | 38.11    | 3         |

| 3MHz QPSK |                 |                       |                                     |           |          |           |
|-----------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel   | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23025     | 700.5           | 24.79                 | -5                                  | 17.64     | 58.08    | 3         |
| 23095     | 707.5           | 24.80                 | -5                                  | 17.65     | 58.21    | 3         |
| 23165     | 714.5           | 24.74                 | -5                                  | 17.59     | 57.41    | 3         |

| 3MHz 16QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23025      | 700.5           | 23.45                 | -5                                  | 16.30     | 42.66    | 3         |
| 23095      | 707.5           | 23.37                 | -5                                  | 16.22     | 41.88    | 3         |
| 23165      | 714.5           | 23.43                 | -5                                  | 16.28     | 42.46    | 3         |

| 3MHz 64QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23025      | 700.5           | 23.13                 | -5                                  | 15.98     | 39.63    | 3         |
| 23095      | 707.5           | 23.05                 | -5                                  | 15.90     | 38.90    | 3         |
| 23165      | 714.5           | 23.03                 | -5                                  | 15.88     | 38.73    | 3         |



| 5MHz QPSK |                 |                       |                                     |           |          |           |
|-----------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel   | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23035     | 701.5           | 24.85                 | -5                                  | 17.70     | 58.88    | 3         |
| 23095     | 707.5           | 24.83                 | -5                                  | 17.68     | 58.61    | 3         |
| 23155     | 713.5           | 24.71                 | -5                                  | 17.56     | 57.02    | 3         |

| 5MHz 16QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23035      | 701.5           | 23.48                 | -5                                  | 16.33     | 42.95    | 3         |
| 23095      | 707.5           | 23.42                 | -5                                  | 16.27     | 42.36    | 3         |
| 23155      | 713.5           | 23.37                 | -5                                  | 16.22     | 41.88    | 3         |

| 5MHz 64QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23035      | 701.5           | 23.13                 | -5                                  | 15.98     | 39.63    | 3         |
| 23095      | 707.5           | 23.02                 | -5                                  | 15.87     | 38.64    | 3         |
| 23155      | 713.5           | 22.98                 | -5                                  | 15.83     | 38.28    | 3         |

| 10MHz QPSK |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23060      | 704             | 24.89                 | -5                                  | 17.74     | 59.43    | 3         |
| 23095      | 707.5           | 24.84                 | -5                                  | 17.69     | 58.75    | 3         |
| 23130      | 711             | 24.79                 | -5                                  | 17.64     | 58.08    | 3         |

| 10MHz 16QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23060       | 704             | 23.54                 | -5                                  | 16.39     | 43.55    | 3         |
| 23095       | 707.5           | 23.52                 | -5                                  | 16.37     | 43.35    | 3         |
| 23130       | 711             | 23.49                 | -5                                  | 16.34     | 43.05    | 3         |

| 10MHz 64QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23060       | 704             | 23.19                 | -5                                  | 16.04     | 40.18    | 3         |
| 23095       | 707.5           | 23.10                 | -5                                  | 15.95     | 39.36    | 3         |
| 23130       | 711             | 23.08                 | -5                                  | 15.93     | 39.17    | 3         |



| LTE BAND 12 ANT1 |                 |                       |                                     |           |          |           |
|------------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| 1.4MHz QPSK      |                 |                       |                                     |           |          |           |
| Channel          | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23017            | 699.7           | 24.84                 | -6.6                                | 16.09     | 40.64    | 3         |
| 23095            | 707.5           | 24.92                 | -6.6                                | 16.17     | 41.40    | 3         |
| 23173            | 715.3           | 24.90                 | -6.6                                | 16.15     | 41.21    | 3         |

| 1.4MHz 16QAM |                 |                       |                                     |           |          |           |
|--------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel      | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23017        | 699.7           | 24.02                 | -6.6                                | 15.27     | 33.65    | 3         |
| 23095        | 707.5           | 24.03                 | -6.6                                | 15.28     | 33.73    | 3         |
| 23173        | 715.3           | 24.02                 | -6.6                                | 15.27     | 33.65    | 3         |

| 1.4MHz 64QAM |                 |                       |                                     |           |          |           |
|--------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel      | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23017        | 699.7           | 23.00                 | -6.6                                | 14.25     | 26.61    | 3         |
| 23095        | 707.5           | 22.98                 | -6.6                                | 14.23     | 26.49    | 3         |
| 23173        | 715.3           | 23.00                 | -6.6                                | 14.25     | 26.61    | 3         |

| 3MHz QPSK |                 |                       |                                     |           |          |           |
|-----------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel   | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23025     | 700.5           | 24.90                 | -6.6                                | 16.15     | 41.21    | 3         |
| 23095     | 707.5           | 24.94                 | -6.6                                | 16.19     | 41.59    | 3         |
| 23165     | 714.5           | 24.84                 | -6.6                                | 16.09     | 40.64    | 3         |

| 3MHz 16QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23025      | 700.5           | 23.96                 | -6.6                                | 15.21     | 33.19    | 3         |
| 23095      | 707.5           | 24.12                 | -6.6                                | 15.37     | 34.43    | 3         |
| 23165      | 714.5           | 23.96                 | -6.6                                | 15.21     | 33.19    | 3         |

| 3MHz 64QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23025      | 700.5           | 22.86                 | -6.6                                | 14.11     | 25.76    | 3         |
| 23095      | 707.5           | 23.03                 | -6.6                                | 14.28     | 26.79    | 3         |
| 23165      | 714.5           | 22.98                 | -6.6                                | 14.23     | 26.49    | 3         |



| 5MHz QPSK |                 |                       |                                     |           |          |           |
|-----------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel   | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23035     | 701.5           | 24.93                 | -6.6                                | 16.18     | 41.50    | 3         |
| 23095     | 707.5           | 24.92                 | -6.6                                | 16.17     | 41.40    | 3         |
| 23155     | 713.5           | 24.90                 | -6.6                                | 16.15     | 41.21    | 3         |

| 5MHz 16QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23035      | 701.5           | 23.92                 | -6.6                                | 15.17     | 32.89    | 3         |
| 23095      | 707.5           | 24.07                 | -6.6                                | 15.32     | 34.04    | 3         |
| 23155      | 713.5           | 23.97                 | -6.6                                | 15.22     | 33.27    | 3         |

| 5MHz 64QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23035      | 701.5           | 22.96                 | -6.6                                | 14.21     | 26.36    | 3         |
| 23095      | 707.5           | 23.04                 | -6.6                                | 14.29     | 26.85    | 3         |
| 23155      | 713.5           | 23.02                 | -6.6                                | 14.27     | 26.73    | 3         |

| 10MHz QPSK |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23060      | 704             | 24.96                 | -6.6                                | 16.21     | 41.78    | 3         |
| 23095      | 707.5           | 24.98                 | -6.6                                | 16.23     | 41.98    | 3         |
| 23130      | 711             | 24.92                 | -6.6                                | 16.17     | 41.40    | 3         |

| 10MHz 16QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23060       | 704             | 24.05                 | -6.6                                | 15.30     | 33.88    | 3         |
| 23095       | 707.5           | 24.18                 | -6.6                                | 15.43     | 34.91    | 3         |
| 23130       | 711             | 24.05                 | -6.6                                | 15.30     | 33.88    | 3         |

| 10MHz 64QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23060       | 704             | 23.01                 | -6.6                                | 14.26     | 26.67    | 3         |
| 23095       | 707.5           | 23.07                 | -6.6                                | 14.32     | 27.04    | 3         |
| 23130       | 711             | 23.06                 | -6.6                                | 14.31     | 26.98    | 3         |

**REMARKS:** ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).



| LTE BAND 13 ANT0 |                 |                       |                                     |           |          |           |
|------------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| 5MHz QPSK        |                 |                       |                                     |           |          |           |
| Channel          | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23205            | 779.5           | 24.73                 | -5.4                                | 17.18     | 52.24    | 3         |
| 23230            | 782             | 24.70                 | -5.4                                | 17.15     | 51.88    | 3         |
| 23255            | 784.5           | 24.72                 | -5.4                                | 17.17     | 52.12    | 3         |

| 5MHz 16QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23205      | 779.5           | 23.40                 | -5.4                                | 15.85     | 38.46    | 3         |
| 23230      | 782             | 23.42                 | -5.4                                | 15.87     | 38.64    | 3         |
| 23255      | 784.5           | 23.45                 | -5.4                                | 15.90     | 38.90    | 3         |

**CHANNEL BANDWIDTH:**

| 5MHz 64QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23205      | 779.5           | 22.83                 | -5.4                                | 15.28     | 33.73    | 3         |
| 23230      | 782             | 22.85                 | -5.4                                | 15.30     | 33.88    | 3         |
| 23255      | 784.5           | 22.85                 | -5.4                                | 15.30     | 33.88    | 3         |

| 10MHz QPSK |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23230      | 782             | 24.74                 | -5.4                                | 17.19     | 52.36    | 3         |

| 10MHz 16QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23230       | 782             | 23.47                 | -5.4                                | 15.92     | 39.08    | 3         |

| 10MHz 64QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23230       | 782             | 22.92                 | -5.4                                | 15.37     | 34.43    | 3         |



**LTE BAND 13 ANT1**

| 5MHz QPSK |                 |                       |                                     |           |          |           |
|-----------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel   | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23205     | 779.5           | 24.33                 | -6.8                                | 15.38     | 34.51    | 3         |
| 23230     | 782             | 24.43                 | -6.8                                | 15.48     | 35.32    | 3         |
| 23255     | 784.5           | 24.29                 | -6.8                                | 15.34     | 34.20    | 3         |

| 5MHz 16QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23205      | 779.5           | 23.48                 | -6.8                                | 14.53     | 28.38    | 3         |
| 23230      | 782             | 23.57                 | -6.8                                | 14.62     | 28.97    | 3         |
| 23255      | 784.5           | 23.48                 | -6.8                                | 14.53     | 28.38    | 3         |

**CHANNEL BANDWIDTH:**

| 5MHz 64QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23205      | 779.5           | 22.47                 | -6.8                                | 13.52     | 22.49    | 3         |
| 23230      | 782             | 22.53                 | -6.8                                | 13.58     | 22.80    | 3         |
| 23255      | 784.5           | 22.50                 | -6.8                                | 13.55     | 22.65    | 3         |

| 10MHz QPSK |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23230      | 782             | 24.77                 | -6.8                                | 15.82     | 38.19    | 3         |

| 10MHz 16QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23230       | 782             | 23.81                 | -6.8                                | 14.86     | 30.62    | 3         |

| 10MHz 64QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23230       | 782             | 22.96                 | -6.8                                | 14.01     | 25.18    | 3         |

**REMARKS:** ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).



LTE BAND 17 ANT0

| 5MHz QPSK |                 |                       |                                     |           |          |           |
|-----------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel   | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23755     | 706.5           | 24.64                 | -5                                  | 17.49     | 56.10    | 3         |
| 23790     | 710             | 24.77                 | -5                                  | 17.62     | 57.81    | 3         |
| 23825     | 713.5           | 24.73                 | -5                                  | 17.58     | 57.28    | 3         |

| 5MHz 16QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23755      | 706.5           | 23.93                 | -5                                  | 16.78     | 47.64    | 3         |
| 23790      | 710             | 24.05                 | -5                                  | 16.90     | 48.98    | 3         |
| 23825      | 713.5           | 23.92                 | -5                                  | 16.77     | 47.53    | 3         |

| 5MHz 64QAM |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23755      | 706.5           | 22.86                 | -5                                  | 15.71     | 37.24    | 3         |
| 23790      | 710             | 23.01                 | -5                                  | 15.86     | 38.55    | 3         |
| 23825      | 713.5           | 22.91                 | -5                                  | 15.76     | 37.67    | 3         |

| 10MHz QPSK |                 |                       |                                     |           |          |           |
|------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel    | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23780      | 709             | 24.79                 | -5                                  | 17.64     | 58.08    | 3         |
| 23790      | 710             | 24.88                 | -5                                  | 17.73     | 59.29    | 3         |
| 23800      | 711             | 24.80                 | -5                                  | 17.65     | 58.21    | 3         |

| 10MHz 16QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23780       | 709             | 24.07                 | -5                                  | 16.92     | 49.20    | 3         |
| 23790       | 710             | 24.08                 | -5                                  | 16.93     | 49.32    | 3         |
| 23800       | 711             | 24.01                 | -5                                  | 16.86     | 48.53    | 3         |

| 10MHz 64QAM |                 |                       |                                     |           |          |           |
|-------------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| Channel     | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
| 23780       | 709             | 22.96                 | -5                                  | 15.81     | 38.11    | 3         |
| 23790       | 710             | 23.06                 | -5                                  | 15.91     | 38.99    | 3         |
| 23800       | 711             | 22.97                 | -5                                  | 15.82     | 38.19    | 3         |



LTE BAND 17 ANT1

5MHz QPSK

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| 23755   | 706.5           | 24.92                 | -6.6                                | 16.17     | 41.40    | 3         |
| 23790   | 710             | 24.85                 | -6.6                                | 16.10     | 40.74    | 3         |
| 23825   | 713.5           | 24.80                 | -6.6                                | 16.05     | 40.27    | 3         |

5MHz 16QAM

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| 23755   | 706.5           | 23.98                 | -6.6                                | 15.23     | 33.34    | 3         |
| 23790   | 710             | 24.14                 | -6.6                                | 15.39     | 34.59    | 3         |
| 23825   | 713.5           | 24.06                 | -6.6                                | 15.31     | 33.96    | 3         |

5MHz 64QAM

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| 23755   | 706.5           | 23.03                 | -6.6                                | 14.28     | 26.79    | 3         |
| 23790   | 710             | 23.08                 | -6.6                                | 14.33     | 27.10    | 3         |
| 23825   | 713.5           | 22.98                 | -6.6                                | 14.23     | 26.49    | 3         |

10MHz QPSK

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| 23780   | 709             | 24.93                 | -6.6                                | 16.18     | 41.50    | 3         |
| 23790   | 710             | 24.97                 | -6.6                                | 16.22     | 41.88    | 3         |
| 23800   | 711             | 24.87                 | -6.6                                | 16.12     | 40.93    | 3         |

10MHz 16QAM

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| 23780   | 709             | 24.07                 | -6.6                                | 15.32     | 34.04    | 3         |
| 23790   | 710             | 24.19                 | -6.6                                | 15.44     | 34.99    | 3         |
| 23800   | 711             | 24.12                 | -6.6                                | 15.37     | 34.43    | 3         |

10MHz 64QAM

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | ERP (dBm) | ERP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|-----------|----------|-----------|
| 23780   | 709             | 23.17                 | -6.6                                | 14.42     | 27.67    | 3         |
| 23790   | 710             | 23.21                 | -6.6                                | 14.46     | 27.93    | 3         |
| 23800   | 711             | 23.12                 | -6.6                                | 14.37     | 27.35    | 3         |



### 3.2 FREQUENCY STABILITY MEASUREMENT

#### 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

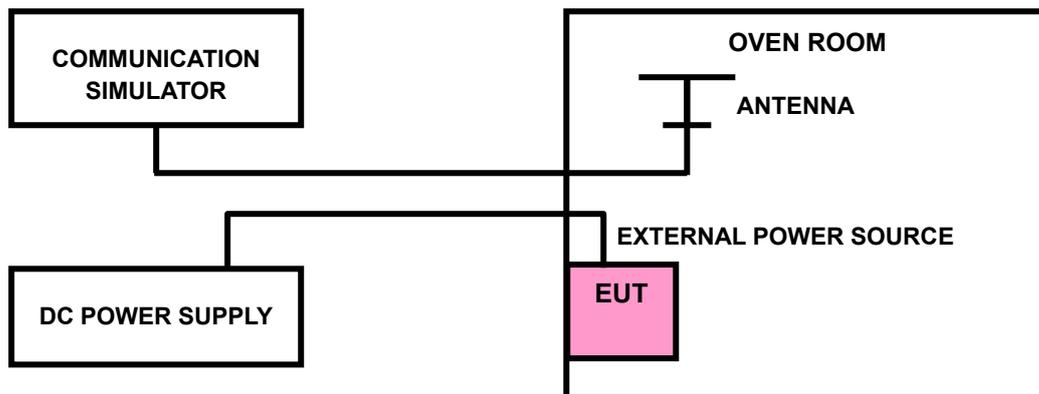
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

#### 3.2.2 TEST PROCEDURE

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the  $\pm 0.5^{\circ}\text{C}$  during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

**NOTE:** The frequency error was recorded frequency error from the communication simulator.

#### 3.3.3 TEST SETUP





### 3.2.3 TEST RESULTS

Please Refer to Appendix of this test report.

Note: VL = Low voltage(3.6V); VN/NV = Normal voltage(3.92V); VH = High voltage(4.5V); NT = Normal temperature (25°C)

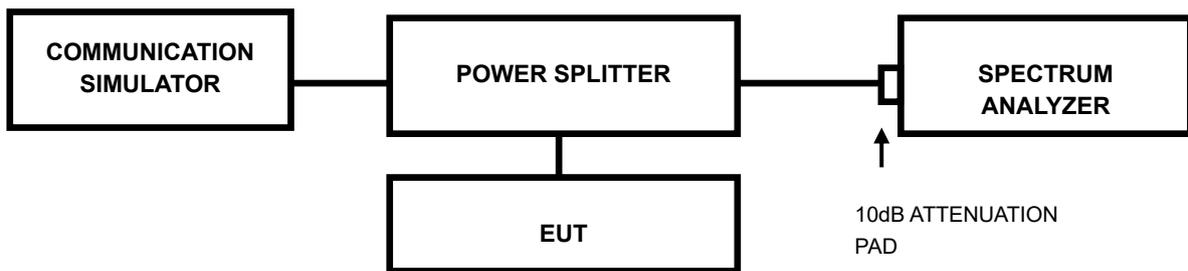


### 3.3 OCCUPIED BANDWIDTH MEASUREMENT

#### 3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

#### 3.3.2 TEST SETUP



#### 3.3.3 TEST PROCEDURES

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

#### 3.3.4 TEST RESULTS

Please Refer to Appendix of this test report.



### 3.4 BAND EDGE MEASUREMENT

#### 3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 27.53(h) specified that For operations in the 1710-1755 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

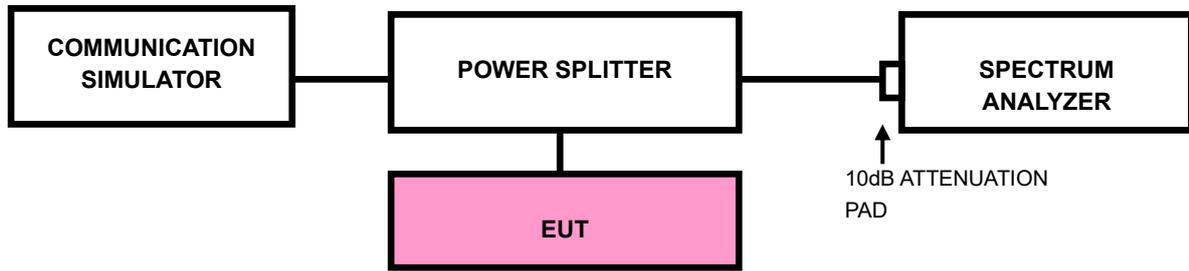
According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB;

47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.



### 3.4.2 TEST SETUP





### 3.4.3 TEST PROCEDURES

- a) All measurements were done at low and high operational frequency range
- b) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- c) Tune the analyzer to the nominal center frequency of the emission bandwidth  
(EBW)
- d) .Set the resolution bandwidth (RBW)  $\geq 1\%$  EBW in the 1MHz band immediately outside and adjacent to the band edge.
- e) Beyond the 1MHz band from the band edge, RBW=1MHz was used.
- f) Set the video bandwidth (VBW) to  $\geq 3 \times$  RBW.
- g) Select the average power (RMS) display detector.
- h) Set the number of measurement points to  $\geq 1001$ .
- i) Use auto-coupled sweep time.
- j) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.
- k) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.
- l) Record the max trace plot into the test report.

### 3.4.4 TEST RESULTS

Please Refer to Appendix of this test report.



## CONDUCTED SPURIOUS EMISSIONS

### 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 27.53(h) specified that For operations in the 1710-1755 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB;

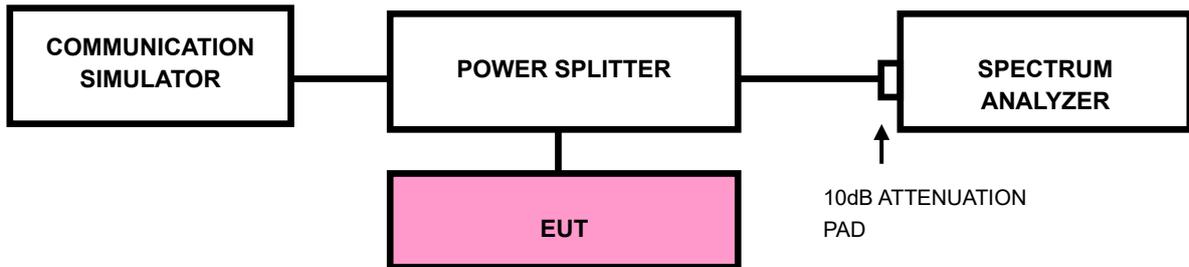
47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.



### 3.5.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 9kHz up to a frequency including its 10<sup>th</sup> harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

### 3.5.3 TEST SETUP



### 3.5.4 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix of this test report.



### 3.6 RADIATED EMISSION MEASUREMENT

#### 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 27.53(h) specified that For operations in the 1710-1755 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB;

47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.



### 3.6.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P 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.
- b. 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.
- c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  
E.R.P power = E.I.P.R power - 2.15dBi.

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

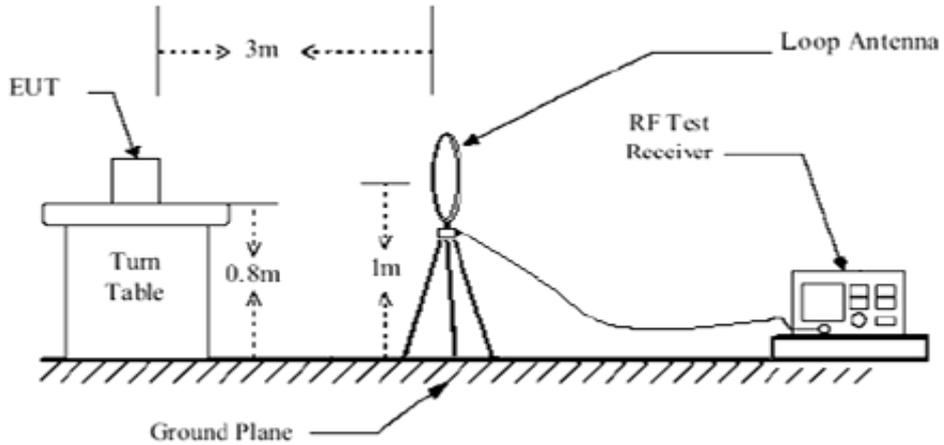
### 3.6.3 DEVIATION FROM TEST STANDARD

No deviation

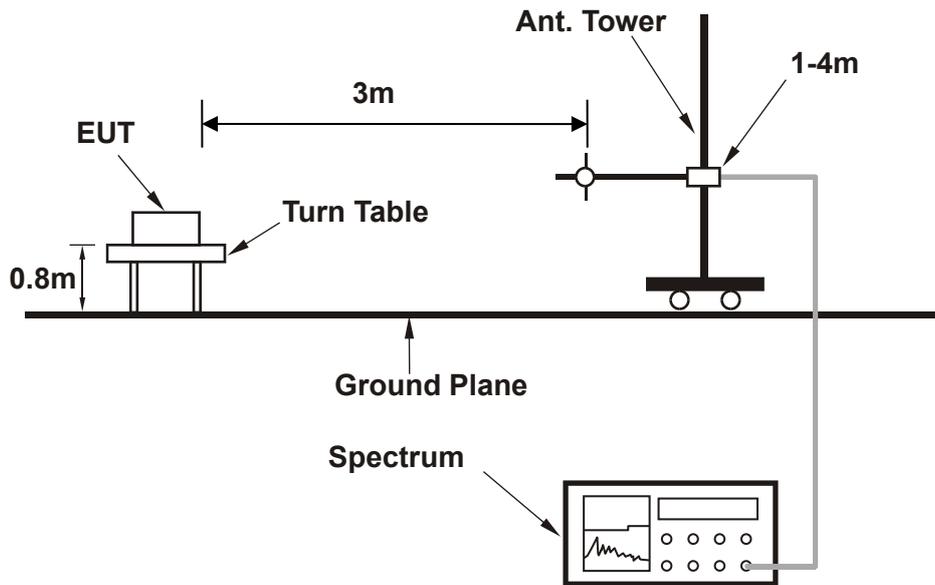


### 3.6.4 TEST SETUP

#### < Frequency Range below 30MHz >

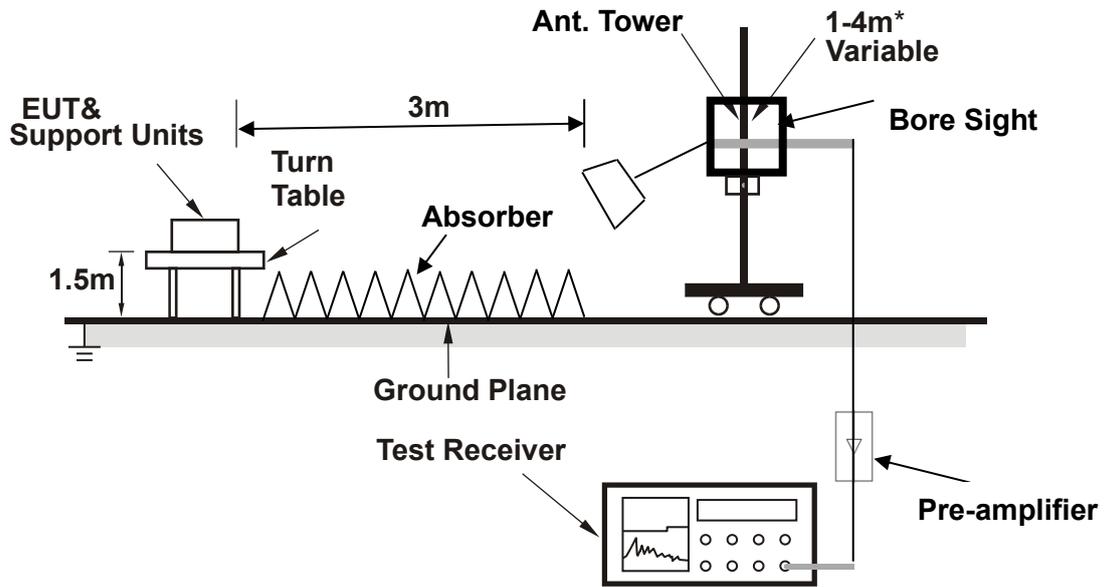


#### < Frequency Range 30MHz~1GHz >





<Frequency Range above 1GHz>



**Note:** Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).



### 3.6.5 TEST RESULTS

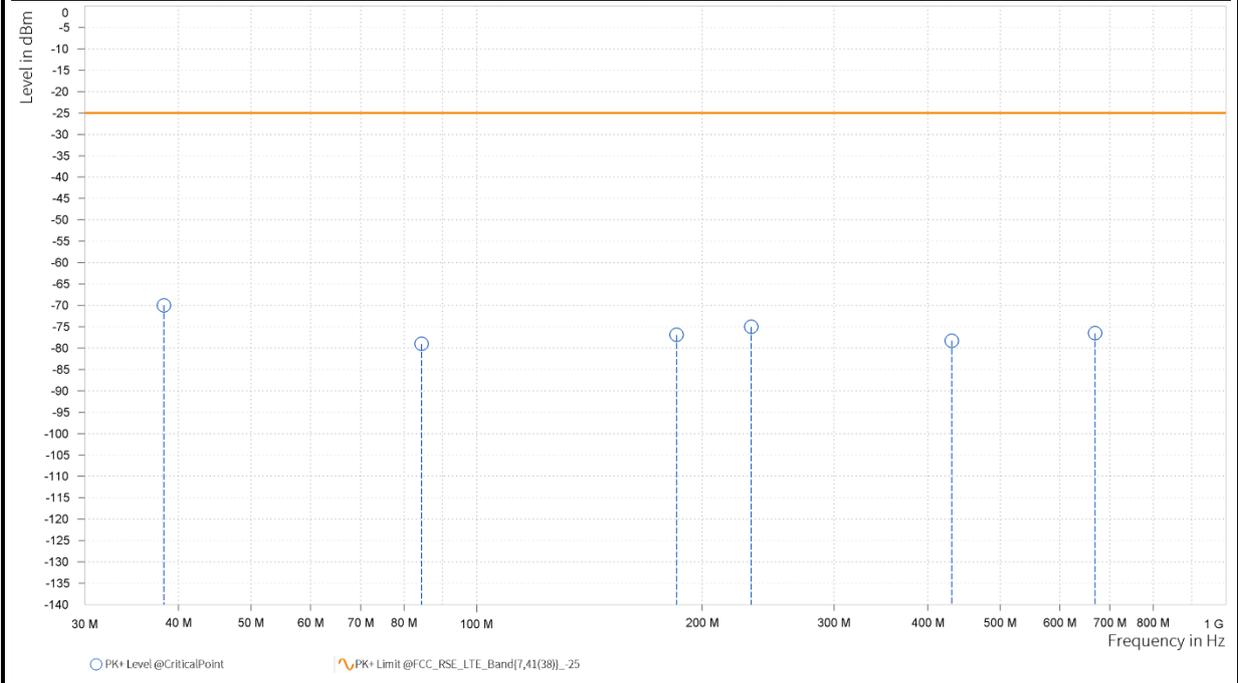
NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

**BELOW 1GHz WORST-CASE DATA**

| LTE Band 7<br>CHANNEL BANDWIDTH: 10MHz / QPSK |                  |                        |             |
|---|------------------|------------------------|-------------|
| <b>MODE</b>                                   | TX channel 21100 | <b>FREQUENCY RANGE</b> | 30MHz~1GHz  |
| <b>ENVIRONMENTAL CONDITIONS</b>               | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ |
| <b>TESTED BY</b>                              | Hanwen Xu        |                        |             |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 1  | 38.250          | -69.97          | -25.00          | 44.97           | 0.02            | H            | 359           | 2.00               |
| 1  | 84.450          | -79.02          | -25.00          | 54.02           | -12.37          | H            | 0.9           | 2.00               |
| 1  | 184.950         | -76.91          | -25.00          | 51.91           | -6.48           | H            | 113.3         | 2.00               |
| 1  | 232.600         | -75.01          | -25.00          | 50.01           | 1.65            | H            | 246.6         | 1.00               |
| 1  | 430.750         | -78.27          | -25.00          | 53.27           | 2.04            | H            | 11.3          | 2.00               |
| 2  | 668.808         | -76.51          | -25.00          | 51.51           | 1.11            | H            | 5.9           | 2.00               |

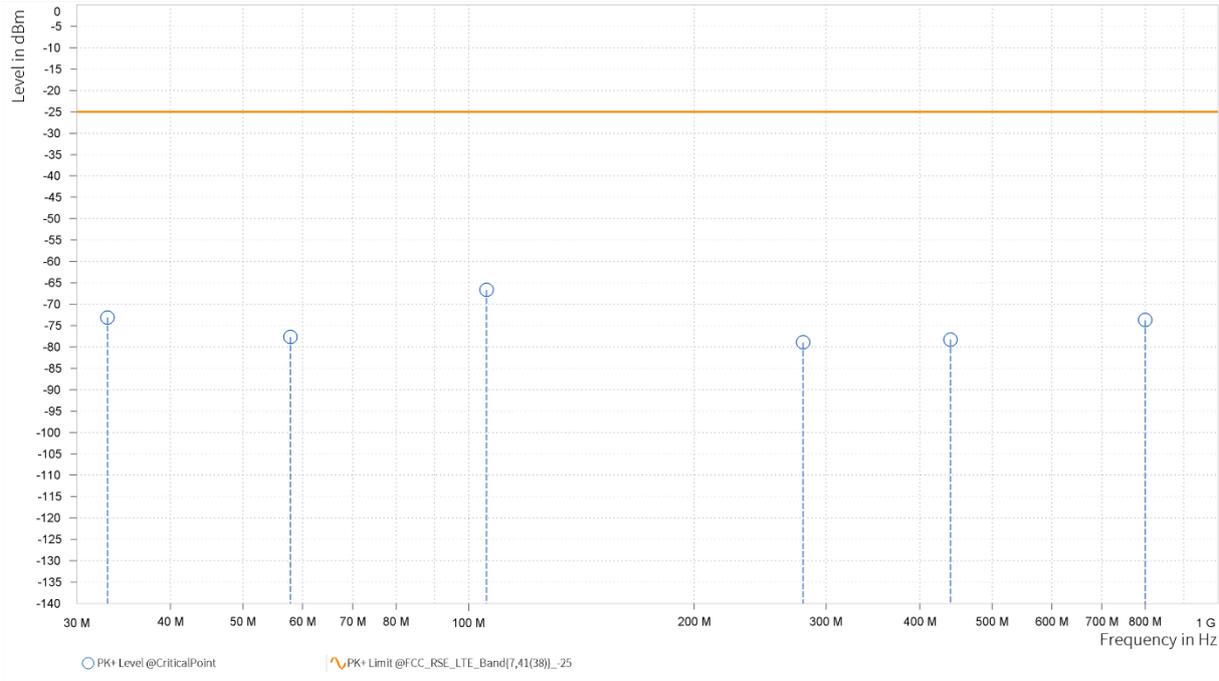




|                                 |                  |                        |             |
|---------------------------------|------------------|------------------------|-------------|
| <b>MODE</b>                     | TX channel 21100 | <b>FREQUENCY RANGE</b> | 30MHz~1GHz  |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |             |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 1  | 32.950          | -73.13          | -25.00          | 48.13           | -6.30           | V            | 0.9           | 2.00               |
| 1  | 57.850          | -77.67          | -25.00          | 52.67           | -4.71           | V            | 4.2           | 1.00               |
| 1  | 105.700         | -66.67          | -25.00          | 41.67           | 4.50            | V            | 355.8         | 2.00               |
| 1  | 279.600         | -78.93          | -25.00          | 53.93           | -1.50           | V            | 355.8         | 2.00               |
| 1  | 439.500         | -78.25          | -25.00          | 53.25           | 1.10            | V            | 354.2         | 1.00               |
| 2  | 799.708         | -73.70          | -25.00          | 48.70           | 2.94            | V            | 357.6         | 1.00               |





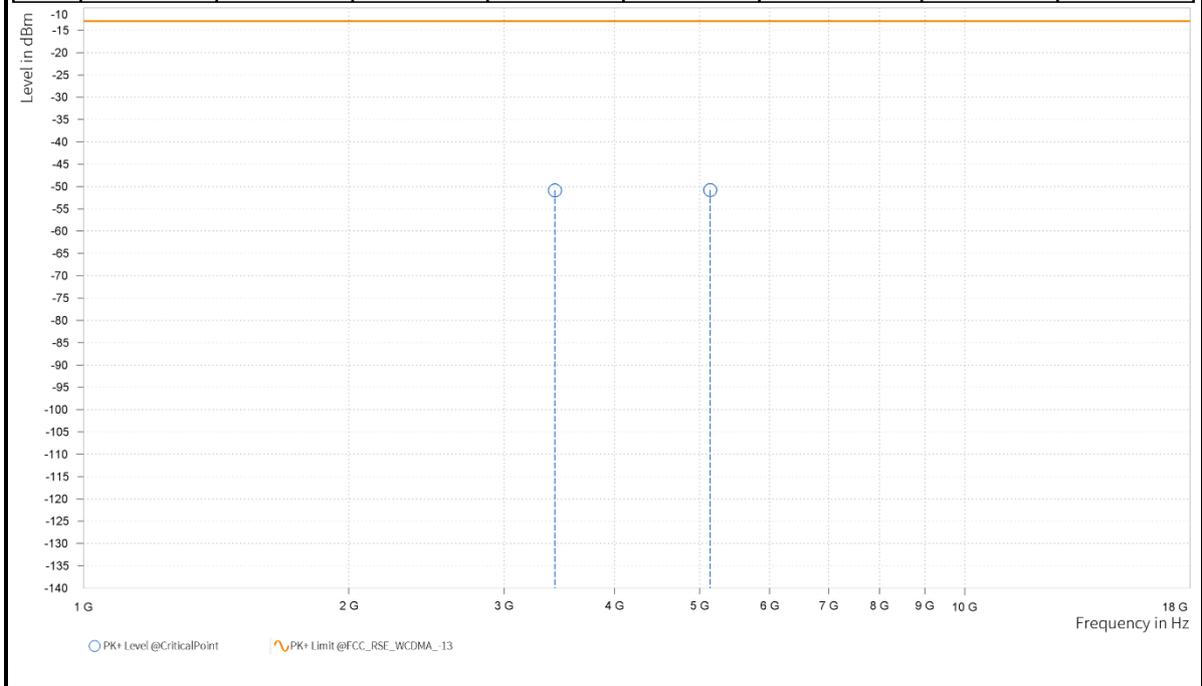
**ABOVE 1GHz**

**Note:** For higher frequency, the emission is too low to be detected.

| WCDMA Band IV ANT0              |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 1312 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,424.800       | -50.89          | -13.00          | 37.89           | 20.50           | H            | 266.7         | 2.00               |
| 4  | 5,137.200       | -50.79          | -13.00          | 37.79           | 23.58           | H            | 216.4         | 1.00               |

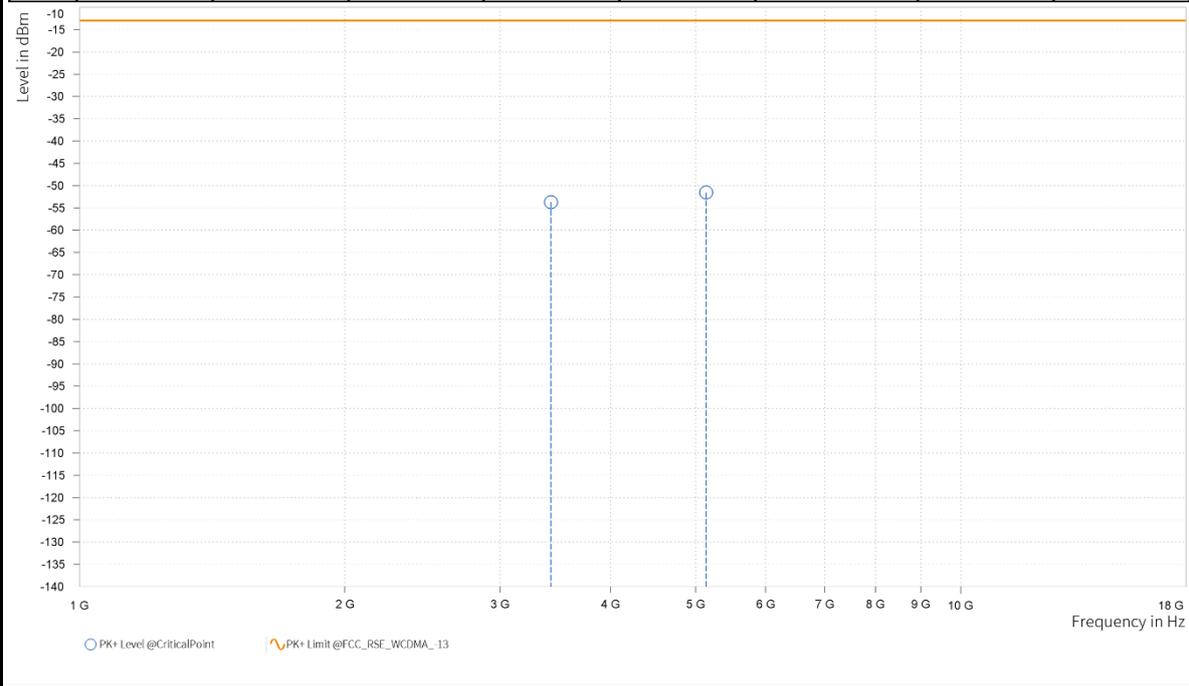




|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 1312 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,424.800       | -53.70          | -13.00          | 40.70           | 20.89           | V            | 359           | 2.00               |
| 4  | 5,137.200       | -51.58          | -13.00          | 38.58           | 23.87           | V            | 1.4           | 2.00               |

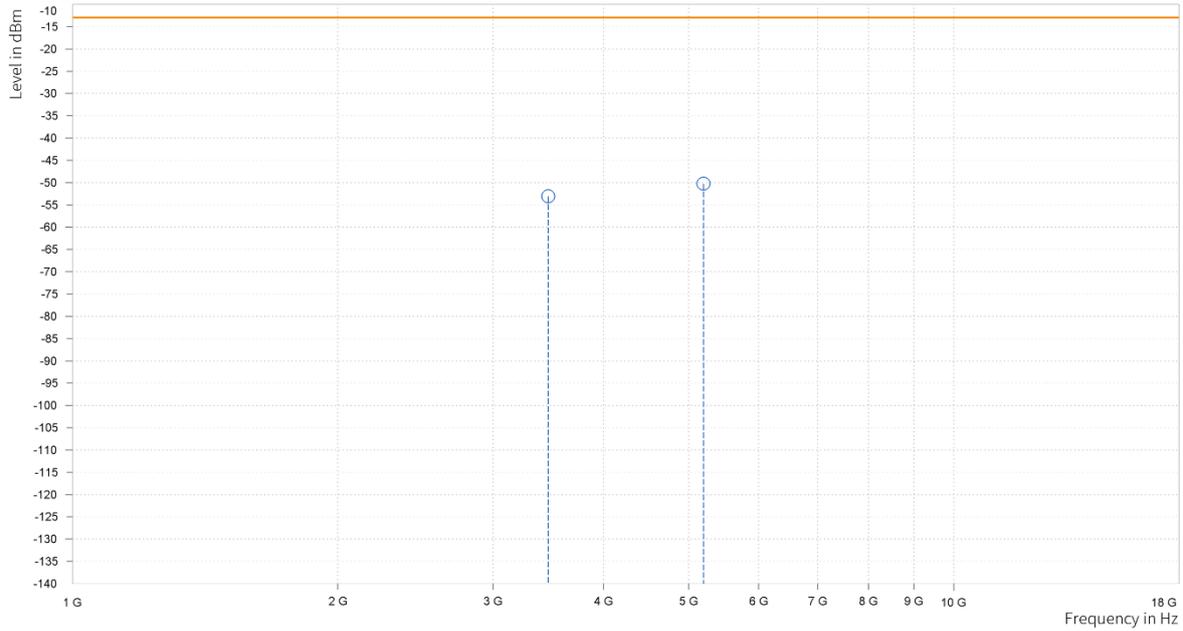




|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 1413 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,465.200       | -53.08          | -13.00          | 40.08           | 20.30           | H            | 358.7         | 1.00               |
| 4  | 5,197.800       | -50.26          | -13.00          | 37.26           | 23.84           | H            | 91.8          | 1.00               |

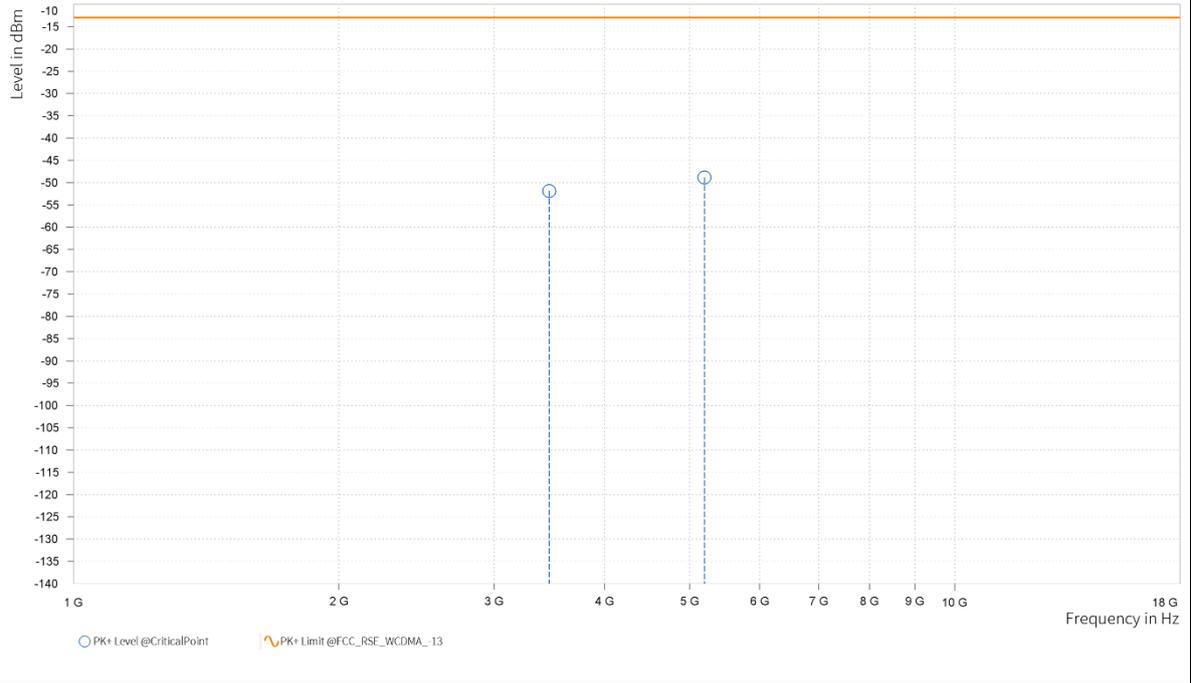




|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 1413 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,465.200       | -51.88          | -13.00          | 38.88           | 20.99           | V            | 359.1         | 1.00               |
| 4  | 5,197.800       | -48.85          | -13.00          | 35.85           | 24.44           | V            | 359.1         | 1.00               |

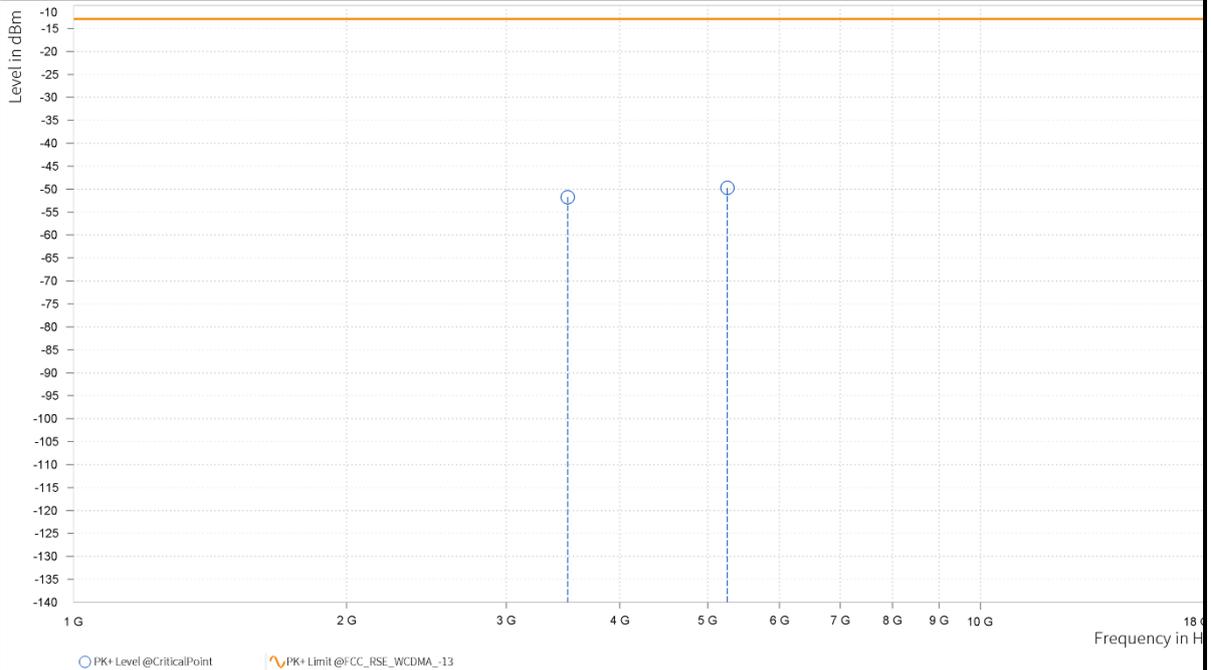




|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 1513 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,505.200       | -51.73          | -13.00          | 38.73           | 20.59           | H            | 1             | 1.00               |
| 4  | 5,257.800       | -49.74          | -13.00          | 36.74           | 24.13           | H            | 304.9         | 1.00               |

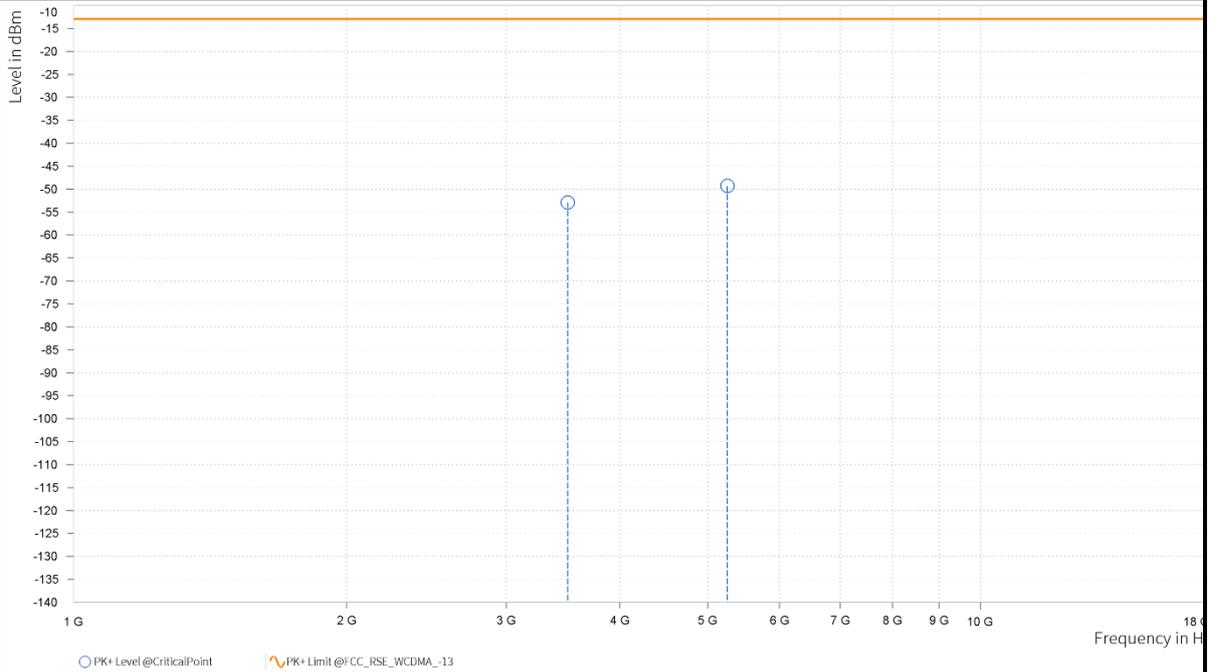




|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 1513 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,505.200       | -52.91          | -13.00          | 39.91           | 21.32           | V            | 0.9           | 2.00               |
| 4  | 5,257.800       | -49.29          | -13.00          | 36.29           | 24.62           | V            | 266.7         | 2.00               |

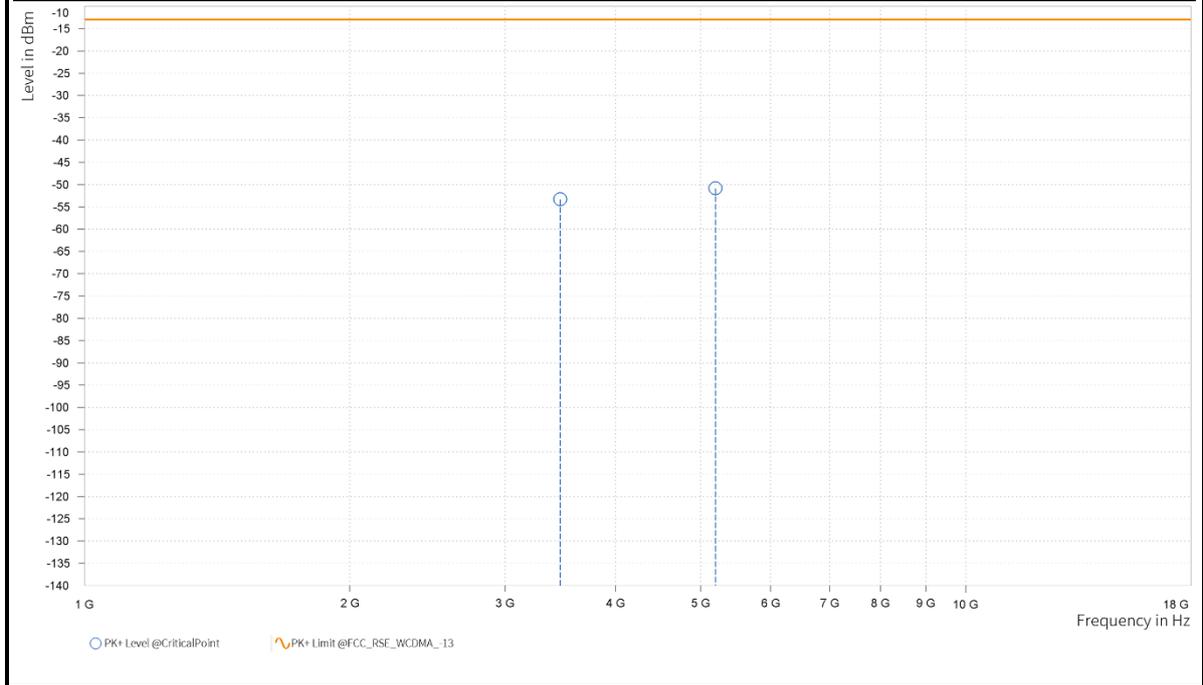




| WCDMA Band IV ANT1              |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 1413 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,465.200       | -53.29          | -13.00          | 40.29           | 20.30           | H            | 215           | 1.00               |
| 4  | 5,197.800       | -50.83          | -13.00          | 37.83           | 23.84           | H            | 1             | 1.00               |

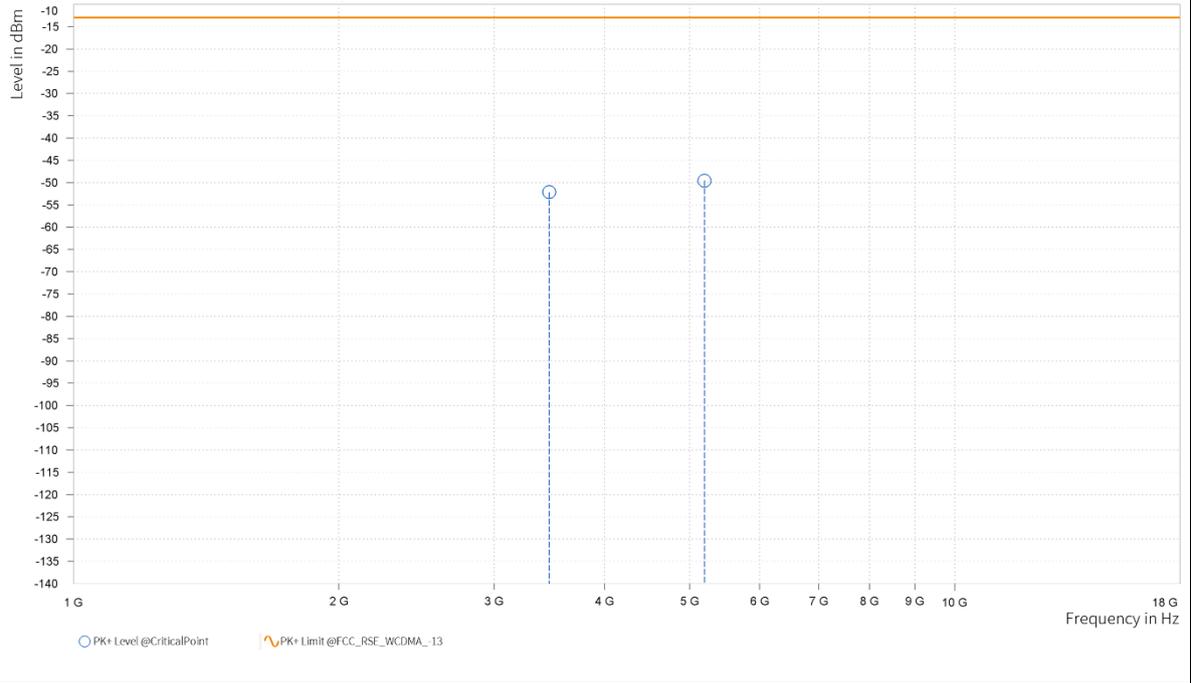




|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 1413 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,465.200       | -52.14          | -13.00          | 39.14           | 20.99           | V            | 147.8         | 2.00               |
| 4  | 5,197.800       | -49.56          | -13.00          | 36.56           | 24.44           | V            | 293.6         | 1.00               |

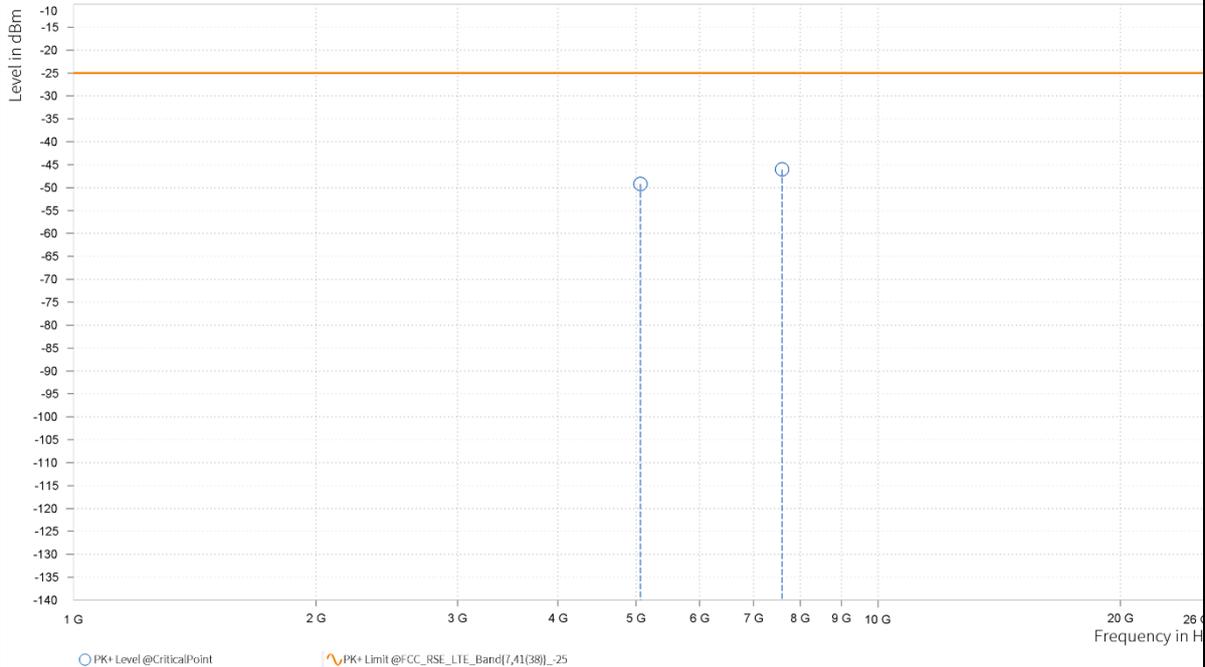




| LTE Band 7 ANT0   |               |                          |                  |
|-------------------|---------------|--------------------------|------------------|
| CHANNEL BANDWIDTH | 5MHz / QPSK   | MODE                     | TX channel 21100 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH  |
| INPUT POWER       | 120Vac 60HZ   | TESTED BY                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,065.500       | -49.19          | -25.00          | 24.19           | 23.81           | H            | 172.6         | 2.00               |
| 5  | 7,598.250       | -46.03          | -25.00          | 21.03           | 27.56           | H            | 250.3         | 1.00               |

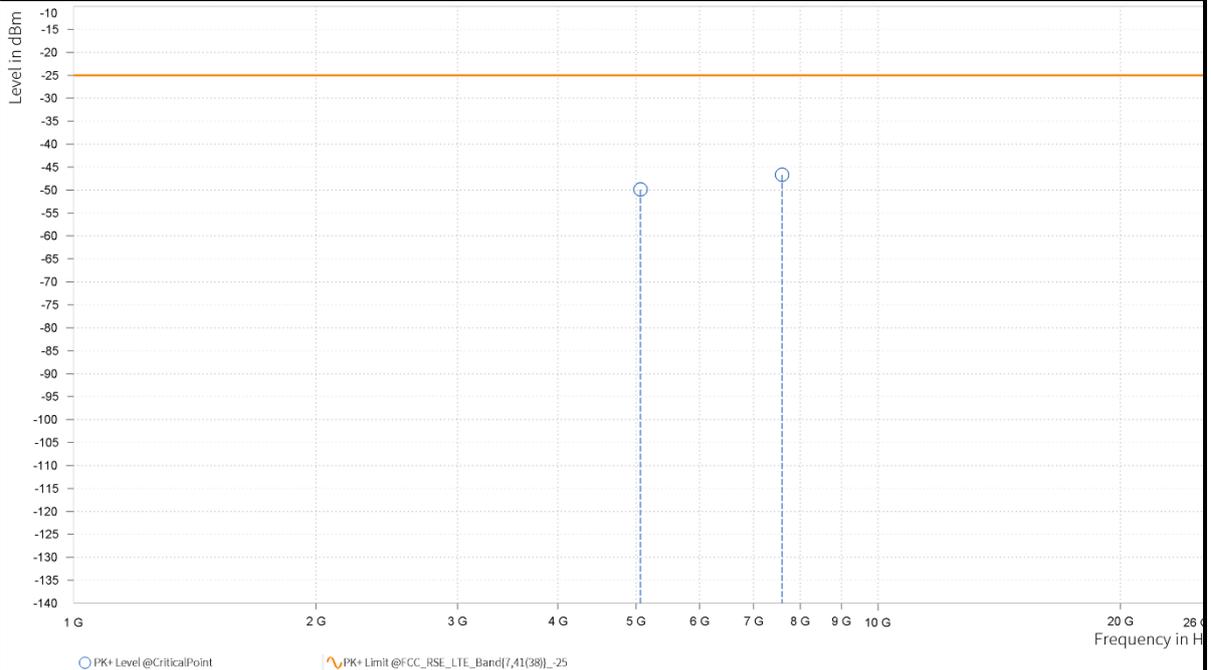




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,065.500       | -49.87          | -25.00          | 24.87           | 24.26           | V            | 1             | 1.00               |
| 5  | 7,598.250       | -46.71          | -25.00          | 21.71           | 27.34           | V            | 237.8         | 2.00               |

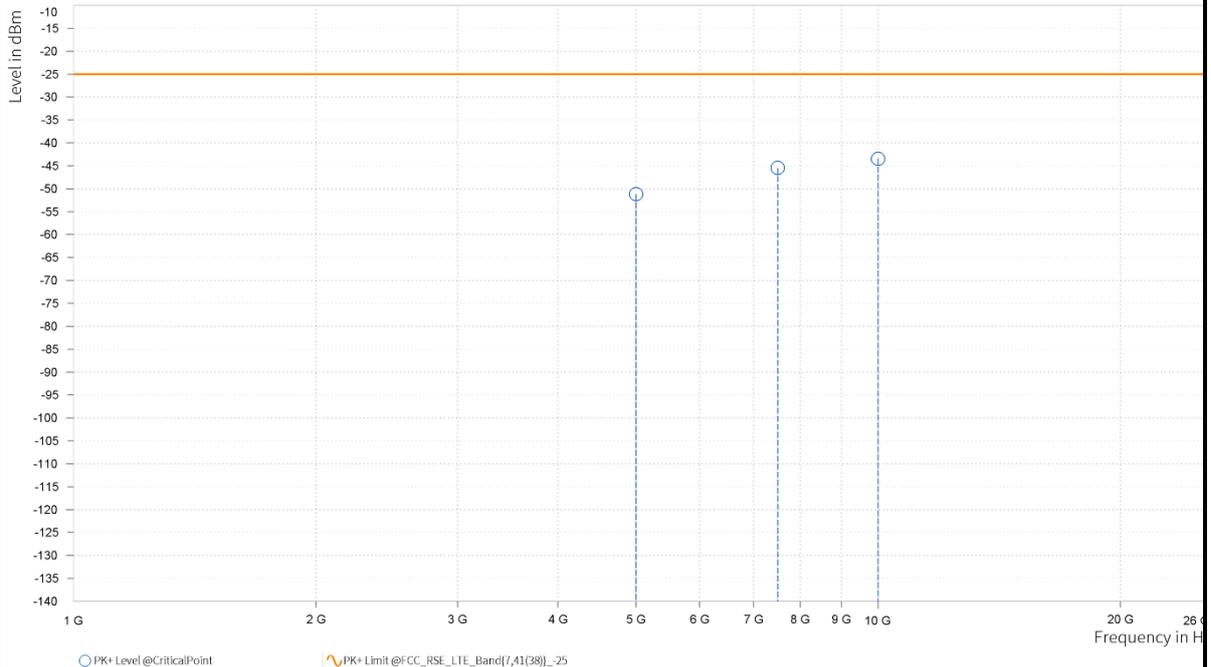




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 20800 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,001.000       | -51.20          | -25.00          | 26.20           | 23.66           | H            | 0.9           | 2.00               |
| 5  | 7,501.500       | -45.48          | -25.00          | 20.48           | 27.41           | H            | 161.9         | 2.00               |
| 6  | 10,002.500      | -43.45          | -25.00          | 18.45           | 17.38           | H            | 320.4         | 1.00               |

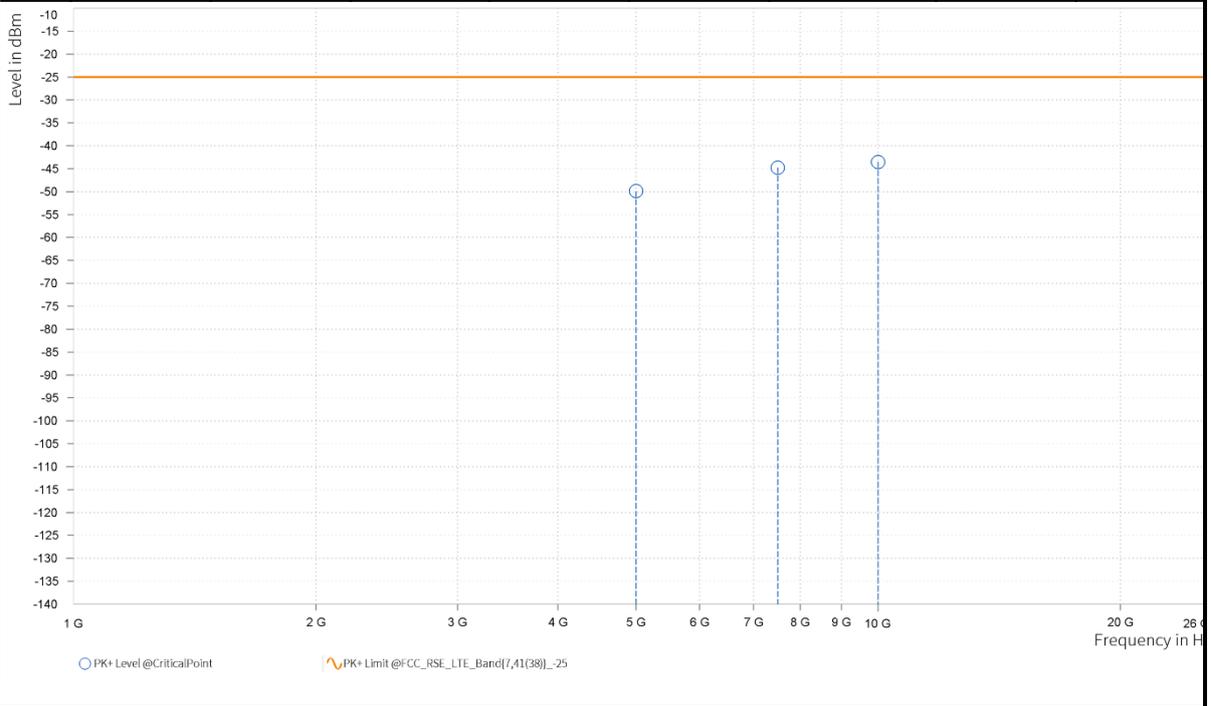




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 20800 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,001.000       | -49.87          | -25.00          | 24.87           | 23.87           | V            | 55.2          | 2.00               |
| 5  | 7,501.500       | -44.78          | -25.00          | 19.78           | 27.39           | V            | 48.1          | 2.00               |
| 6  | 10,002.000      | -43.53          | -25.00          | 18.53           | 17.19           | V            | 1             | 1.00               |

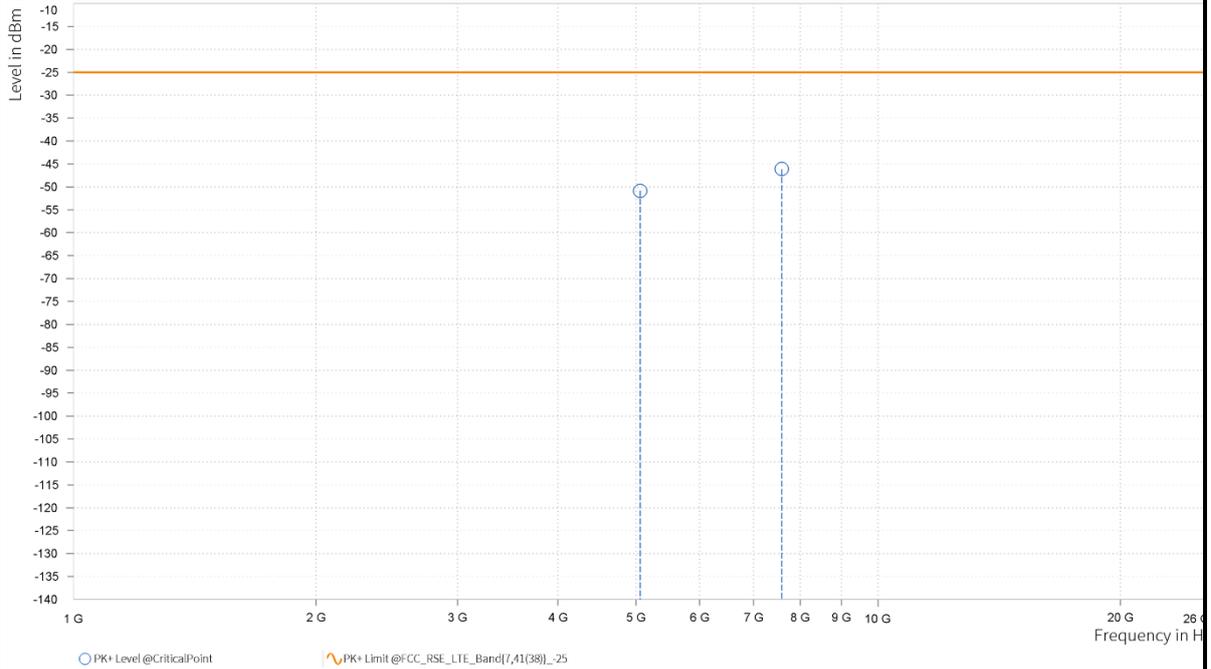




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,061.000       | -50.87          | -25.00          | 25.87           | 23.87           | H            | 348.7         | 1.00               |
| 5  | 7,591.500       | -46.13          | -25.00          | 21.13           | 27.52           | H            | 122.2         | 1.00               |

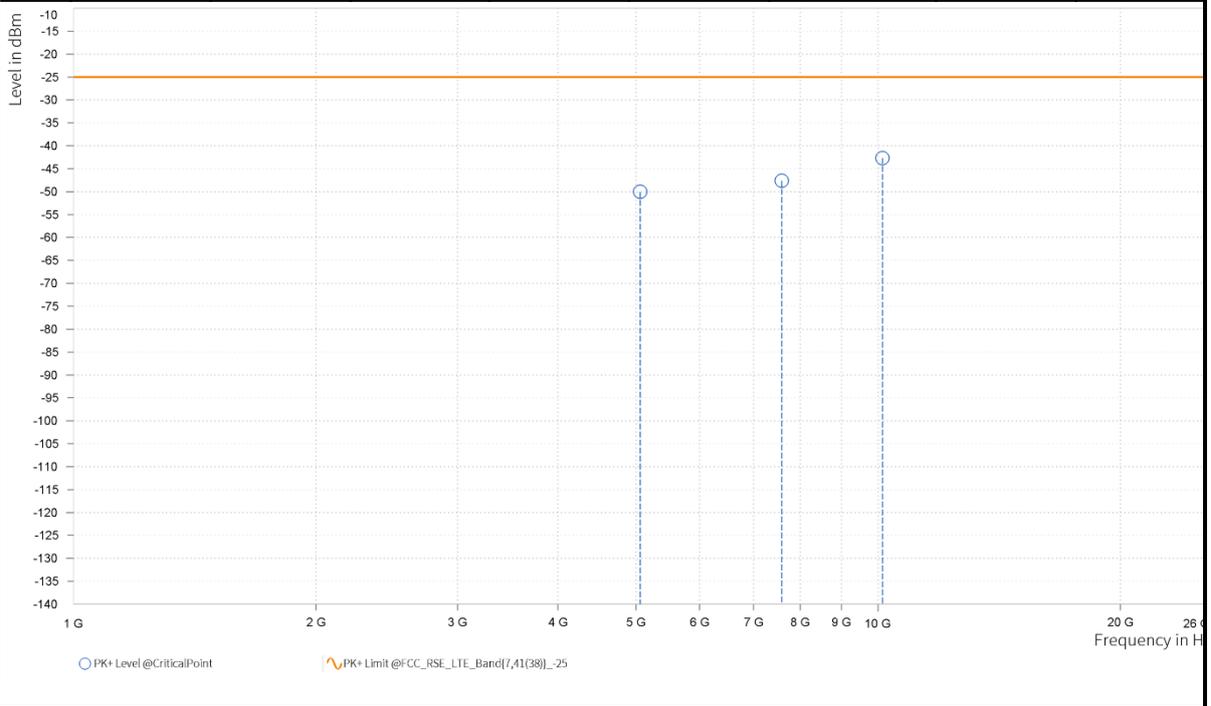




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,061.000       | -50.04          | -25.00          | 25.04           | 24.30           | V            | 267.4         | 2.00               |
| 5  | 7,591.500       | -47.65          | -25.00          | 22.65           | 27.30           | V            | 166.9         | 2.00               |
| 6  | 10,122.500      | -42.66          | -25.00          | 17.66           | 16.69           | V            | 304.9         | 1.00               |

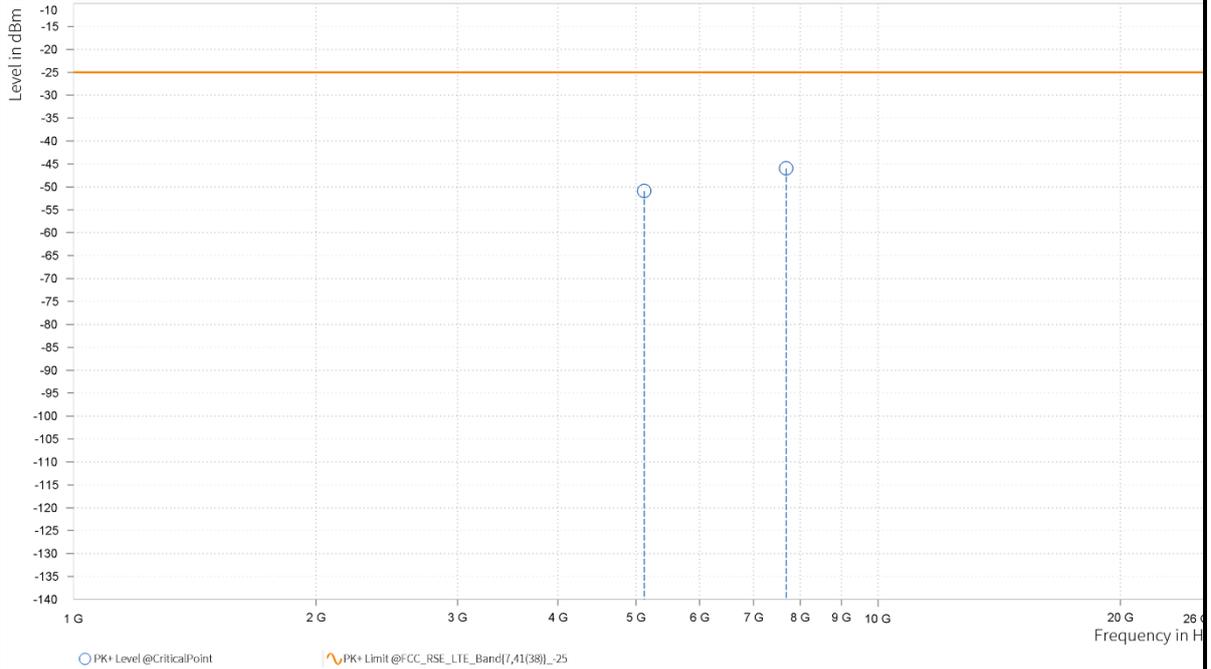




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 21400 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,121.000       | -50.92          | -25.00          | 25.92           | 23.51           | H            | 359           | 2.00               |
| 5  | 7,681.500       | -45.95          | -25.00          | 20.95           | 28.00           | H            | 44.5          | 2.00               |

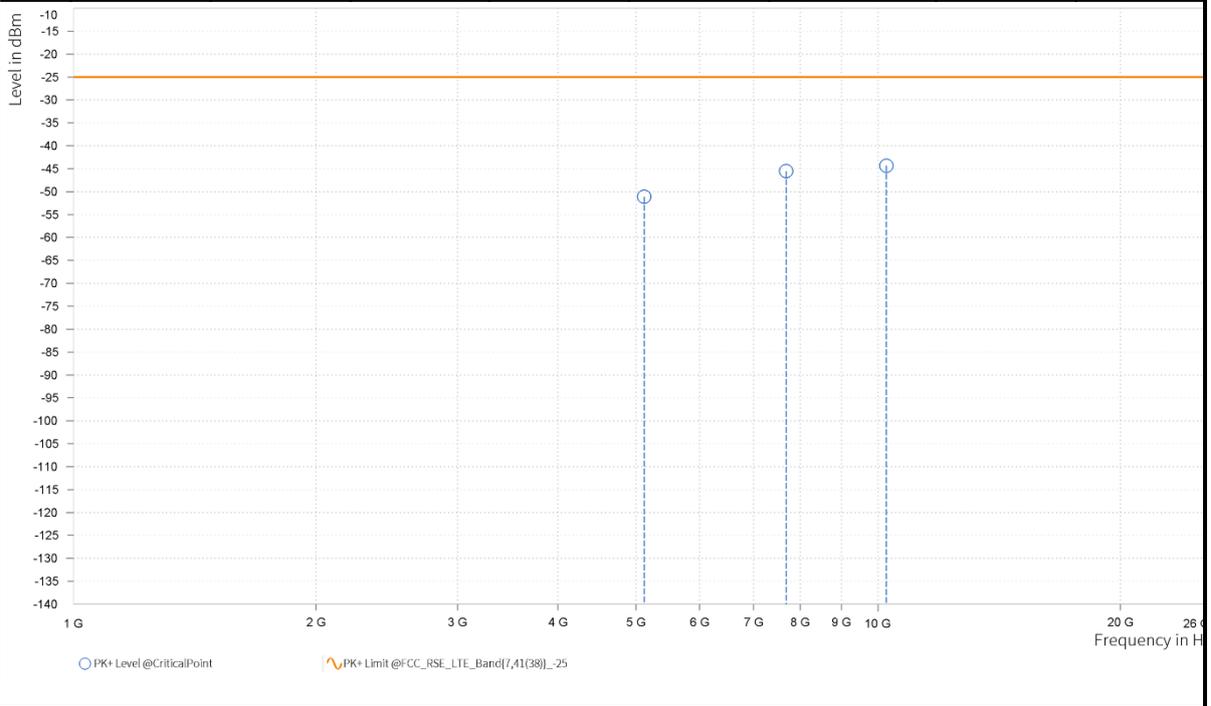




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 21400 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,121.000       | -51.12          | -25.00          | 26.12           | 23.91           | V            | 1             | 1.00               |
| 5  | 7,681.500       | -45.53          | -25.00          | 20.53           | 27.82           | V            | 237           | 2.00               |
| 6  | 10,242.000      | -44.33          | -25.00          | 19.33           | 17.06           | V            | 318.2         | 1.00               |

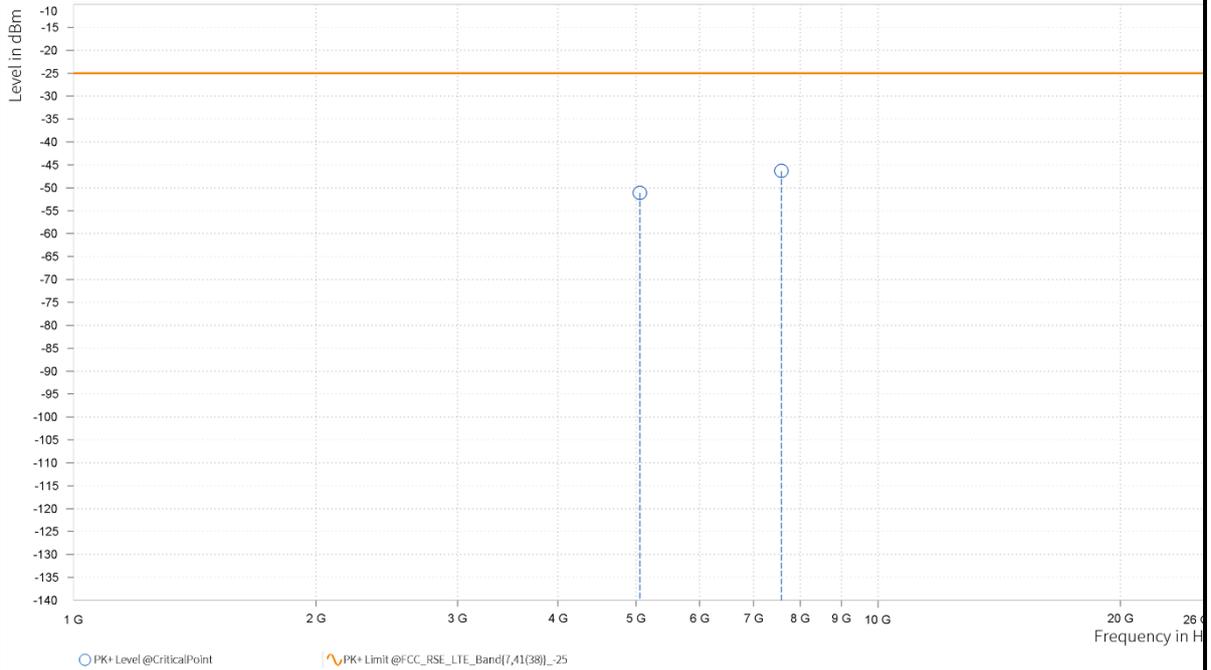




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 15MHz / QPSK  | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,056.500       | -51.12          | -25.00          | 26.12           | 23.92           | H            | 359.1         | 1.00               |
| 5  | 7,584.750       | -46.32          | -25.00          | 21.32           | 27.48           | H            | 164.2         | 2.00               |

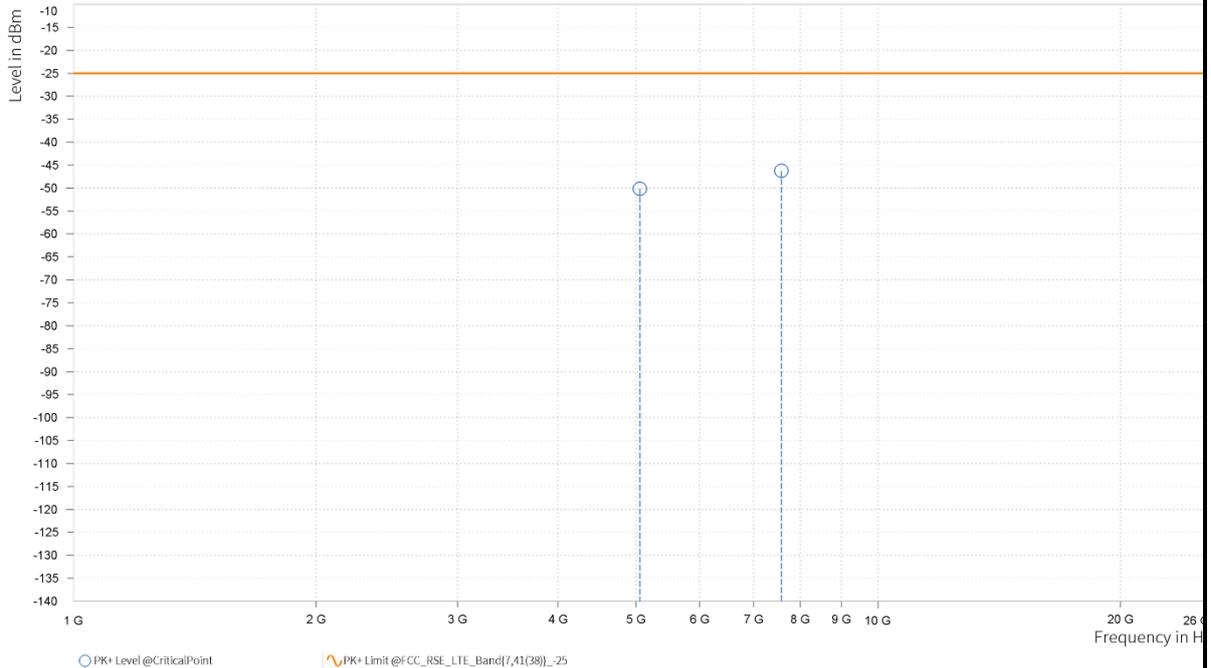




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 15MHz / QPSK  | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,056.500       | -50.15          | -25.00          | 25.15           | 24.34           | V            | 61.5          | 2.00               |
| 5  | 7,584.750       | -46.26          | -25.00          | 21.26           | 27.26           | V            | 354.7         | 1.00               |

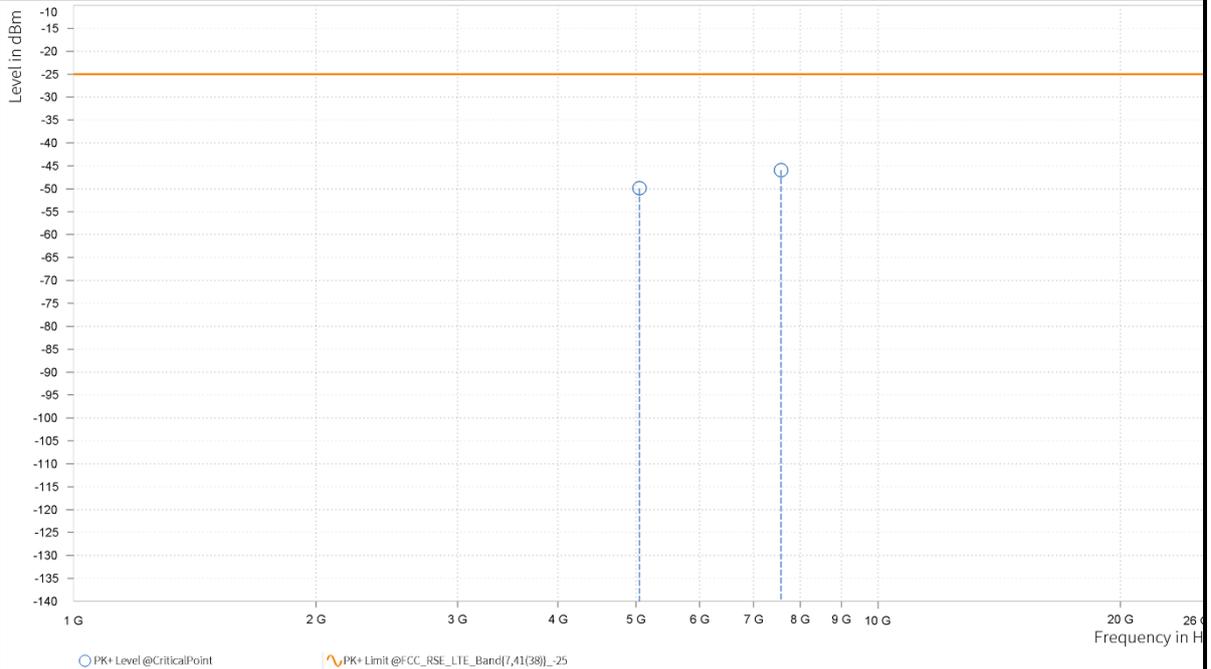




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 20MHz / QPSK  | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,052.000       | -49.90          | -25.00          | 24.90           | 23.97           | H            | 0.9           | 2.00               |
| 5  | 7,578.000       | -45.92          | -25.00          | 20.92           | 27.48           | H            | 0.9           | 2.00               |

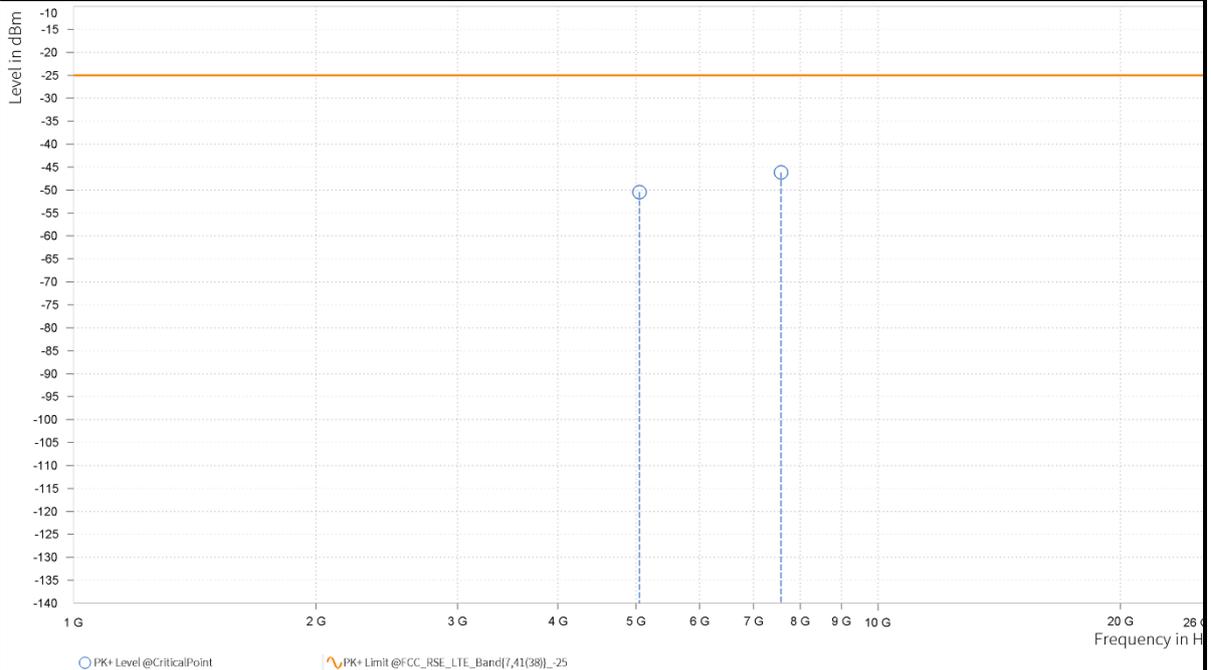




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 20MHz / QPSK  | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,052.000       | -50.43          | -25.00          | 25.43           | 24.38           | V            | 0.9           | 2.00               |
| 5  | 7,578.000       | -46.15          | -25.00          | 21.15           | 27.27           | V            | 359.1         | 1.00               |

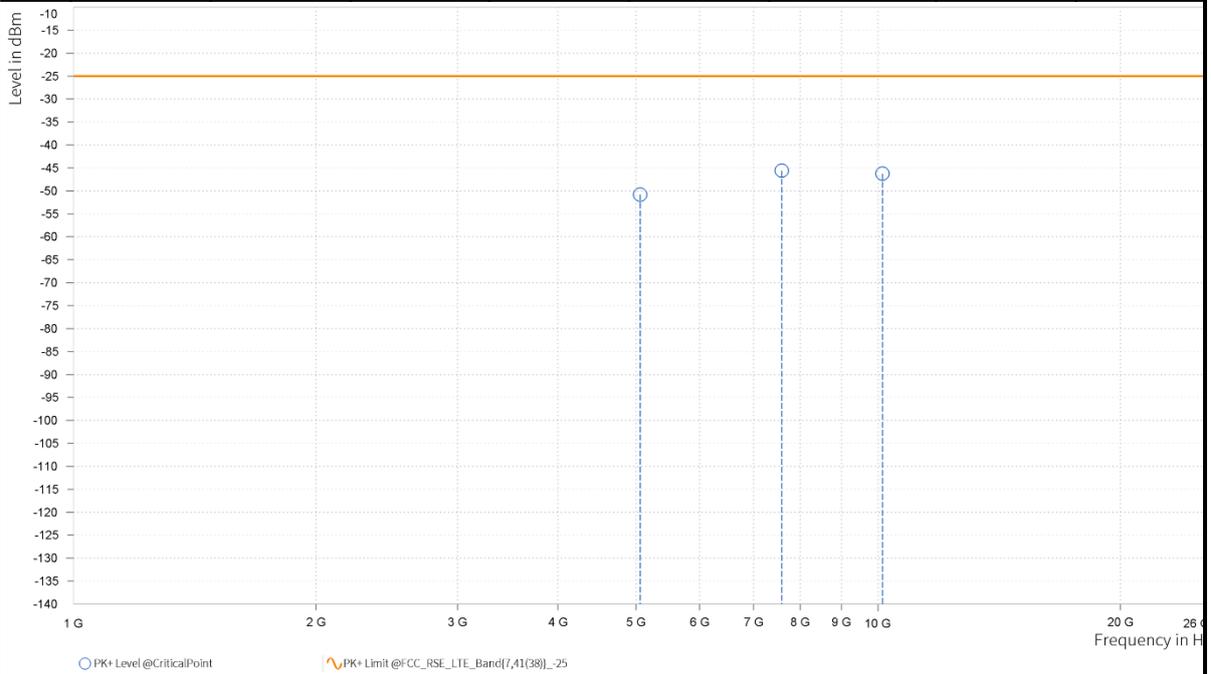




| LTE Band 7 ANT1          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,061.000       | -50.79          | -25.00          | 25.79           | 23.87           | H            | 61.4          | 2.00               |
| 5  | 7,591.500       | -45.60          | -25.00          | 20.60           | 27.52           | H            | 1             | 1.00               |
| 6  | 10,122.500      | -46.27          | -25.00          | 21.27           | 17.10           | H            | 207.9         | 1.00               |

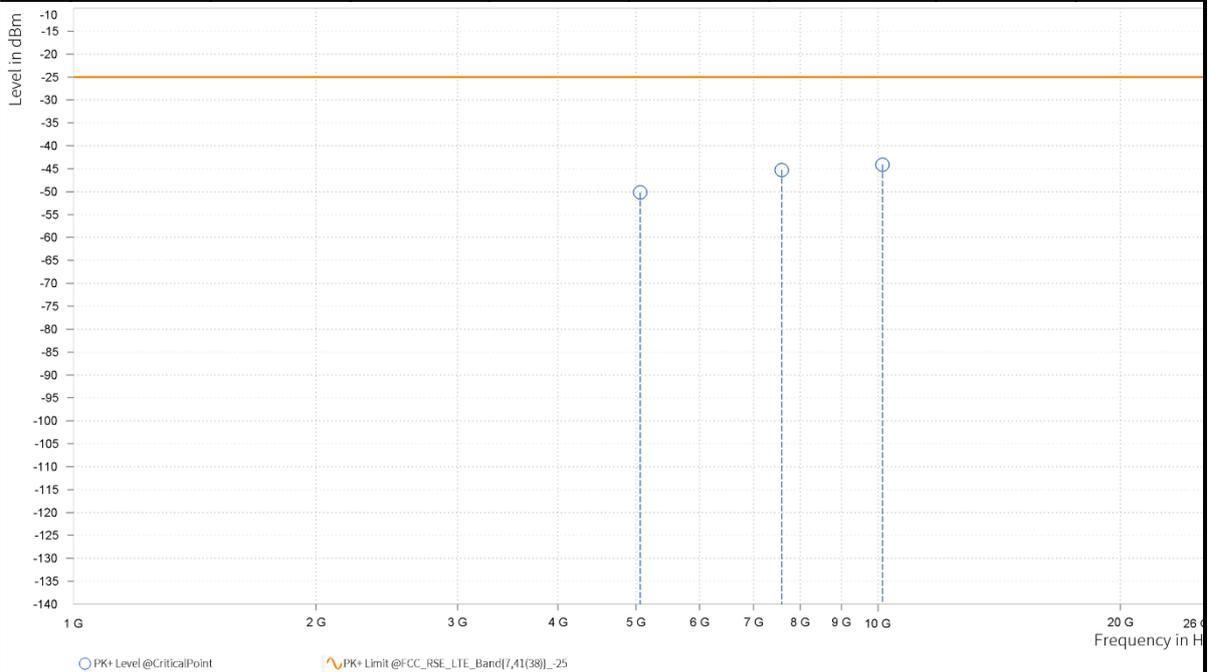




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 21100 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 5,061.000       | -50.16          | -25.00          | 25.16           | 24.30           | V            | 63            | 2.00               |
| 5  | 7,591.500       | -45.26          | -25.00          | 20.26           | 27.30           | V            | 357.6         | 1.00               |
| 6  | 10,122.000      | -44.11          | -25.00          | 19.11           | 16.69           | V            | 153.4         | 1.00               |

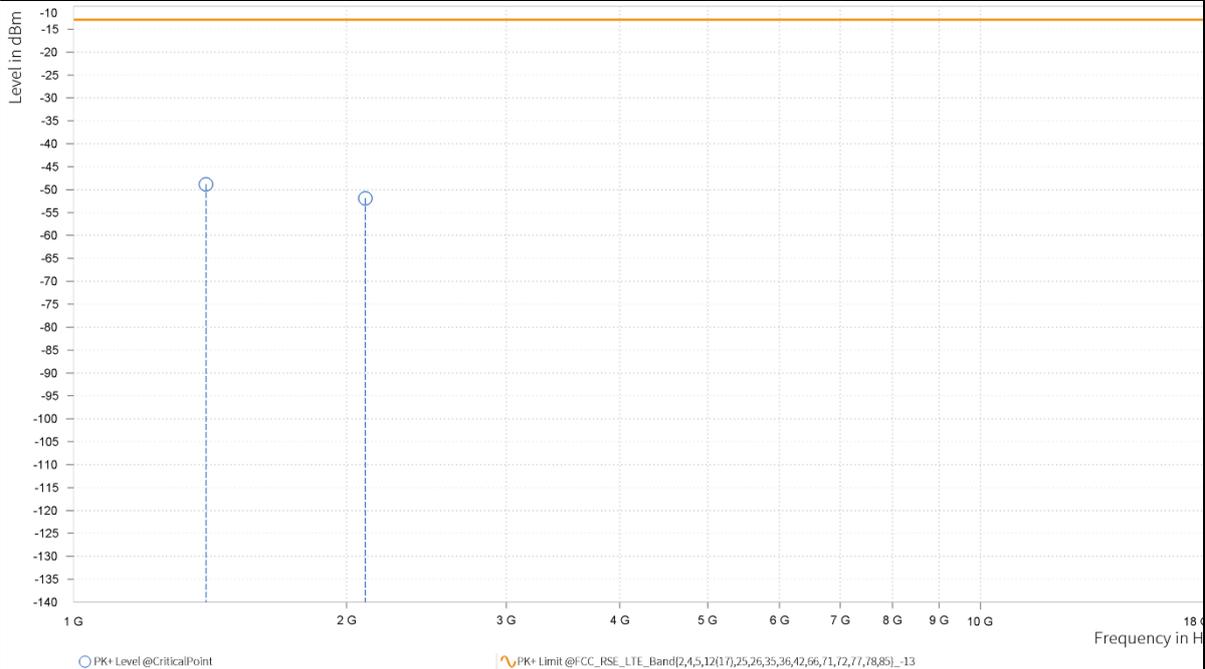




| LTE BAND 12 ANT0  |               |                          |                  |
|-------------------|---------------|--------------------------|------------------|
| CHANNEL BANDWIDTH | 5MHz / QPSK   | MODE                     | TX channel 23035 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH  |
| INPUT POWER       | 120Vac 60HZ   | TESTED BY                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,399.000       | -48.85          | -13.00          | 35.85           | 13.26           | H            | 183.2         | 2.00               |
| 2  | 2,097.750       | -51.90          | -13.00          | 38.90           | 18.45           | H            | 359.1         | 1.00               |

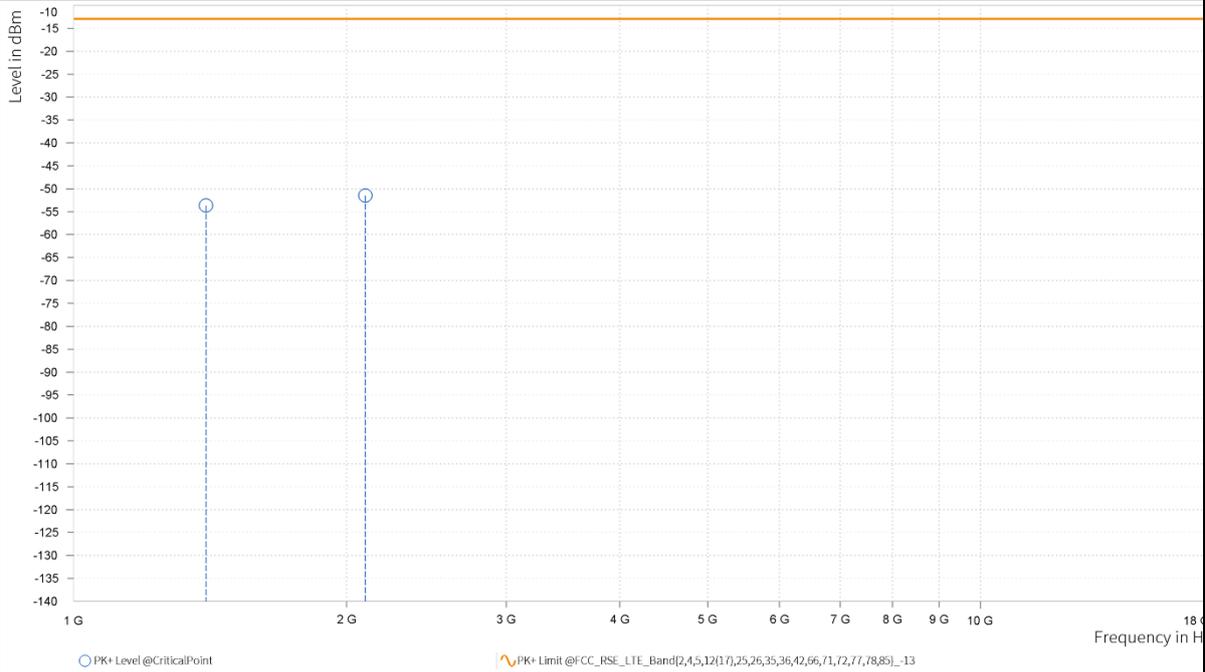




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23035 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,398.500       | -53.68          | -13.00          | 40.68           | 13.68           | V            | 67.2          | 2.00               |
| 2  | 2,097.750       | -51.48          | -13.00          | 38.48           | 19.48           | V            | 176.1         | 1.00               |

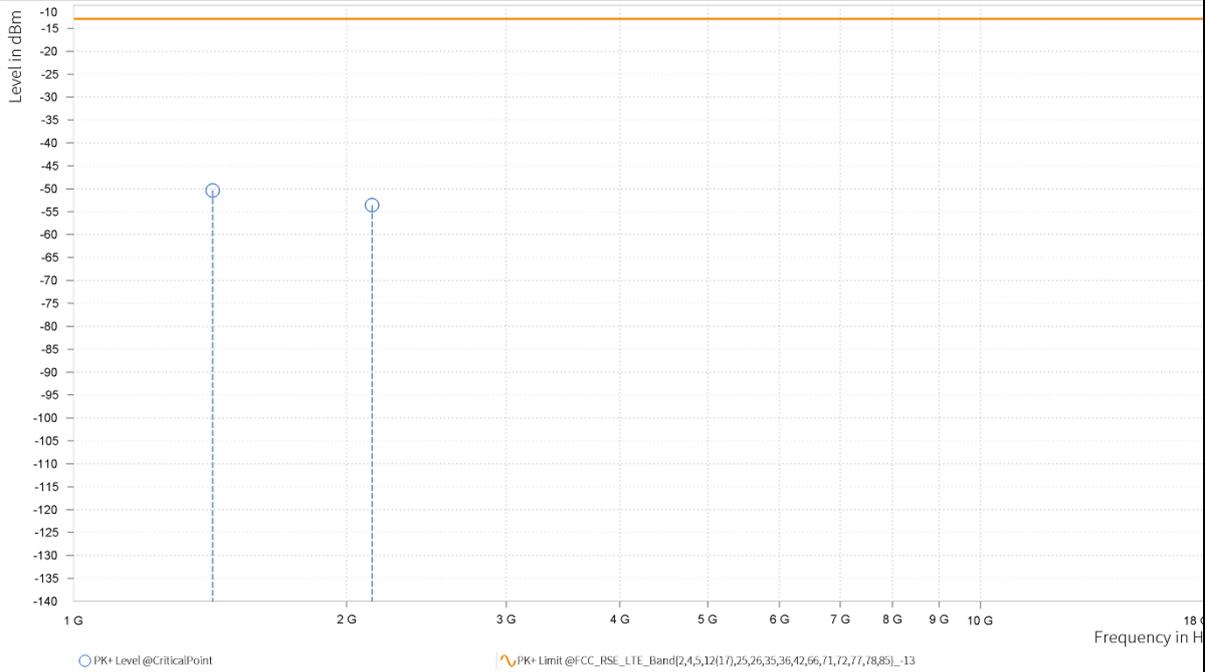




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23095 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,422.500       | -50.36          | -13.00          | 37.36           | 13.81           | H            | 351.8         | 1.00               |
| 2  | 2,133.750       | -53.59          | -13.00          | 40.59           | 19.16           | H            | 359           | 1.00               |

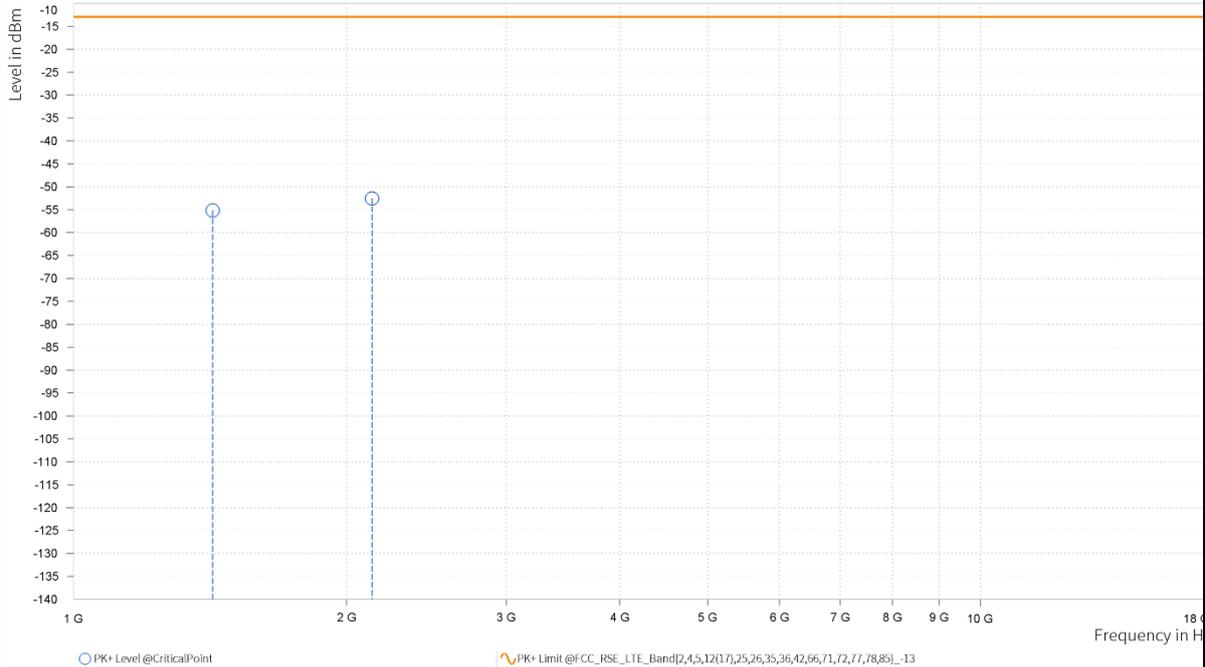




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23095 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,422.500       | -55.16          | -13.00          | 42.16           | 13.26           | V            | 160.5         | 2.00               |
| 2  | 2,133.750       | -52.53          | -13.00          | 39.53           | 19.34           | V            | 358.2         | 1.00               |

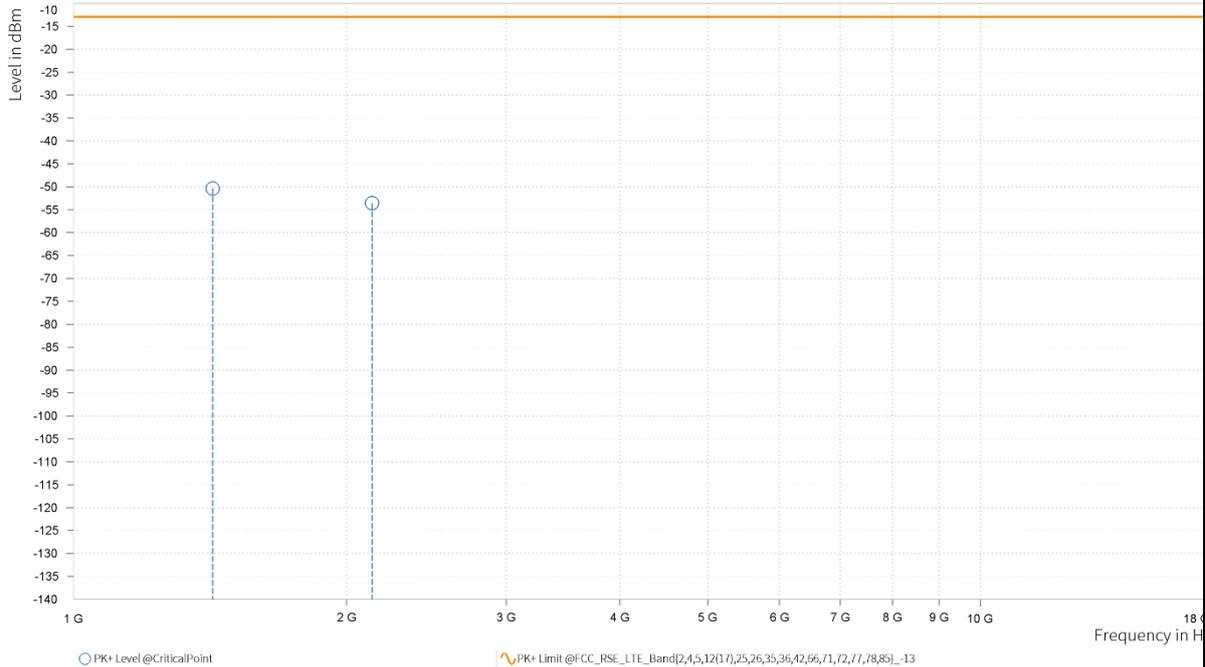




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23155 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,422.500       | -50.36          | -13.00          | 37.36           | 13.81           | H            | 351.8         | 1.00               |
| 2  | 2,133.750       | -53.59          | -13.00          | 40.59           | 19.16           | H            | 359           | 1.00               |

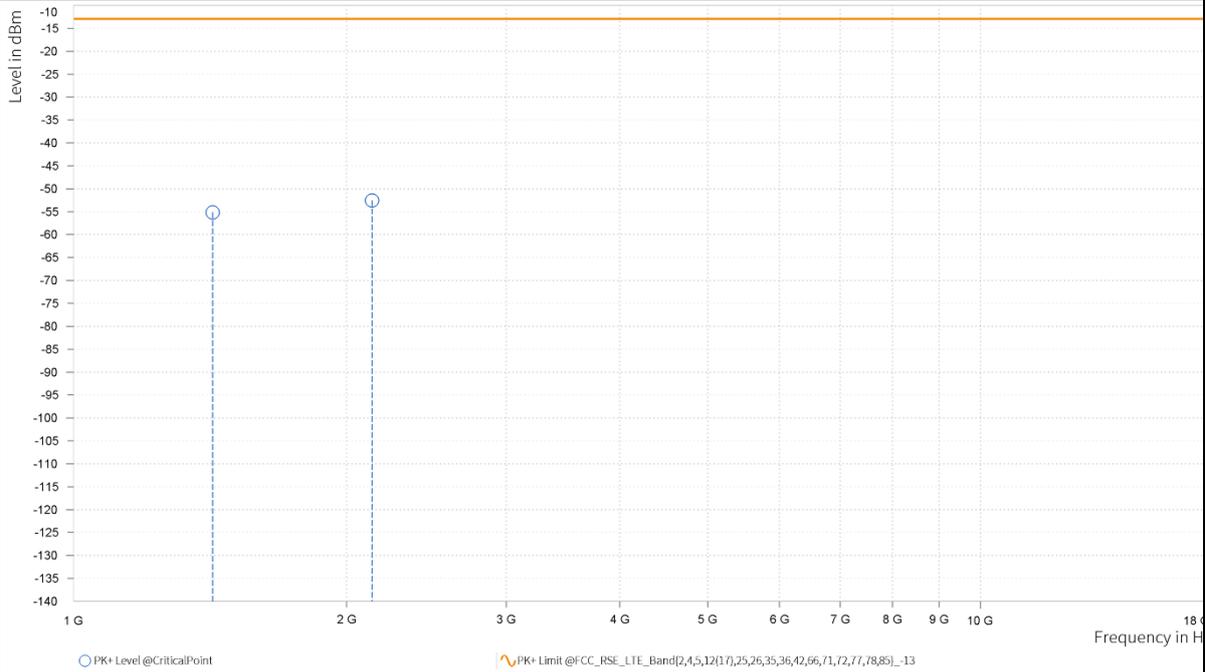




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23155 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,422.500       | -55.16          | -13.00          | 42.16           | 13.26           | V            | 160.5         | 2.00               |
| 2  | 2,133.750       | -52.53          | -13.00          | 39.53           | 19.34           | V            | 358.2         | 1.00               |

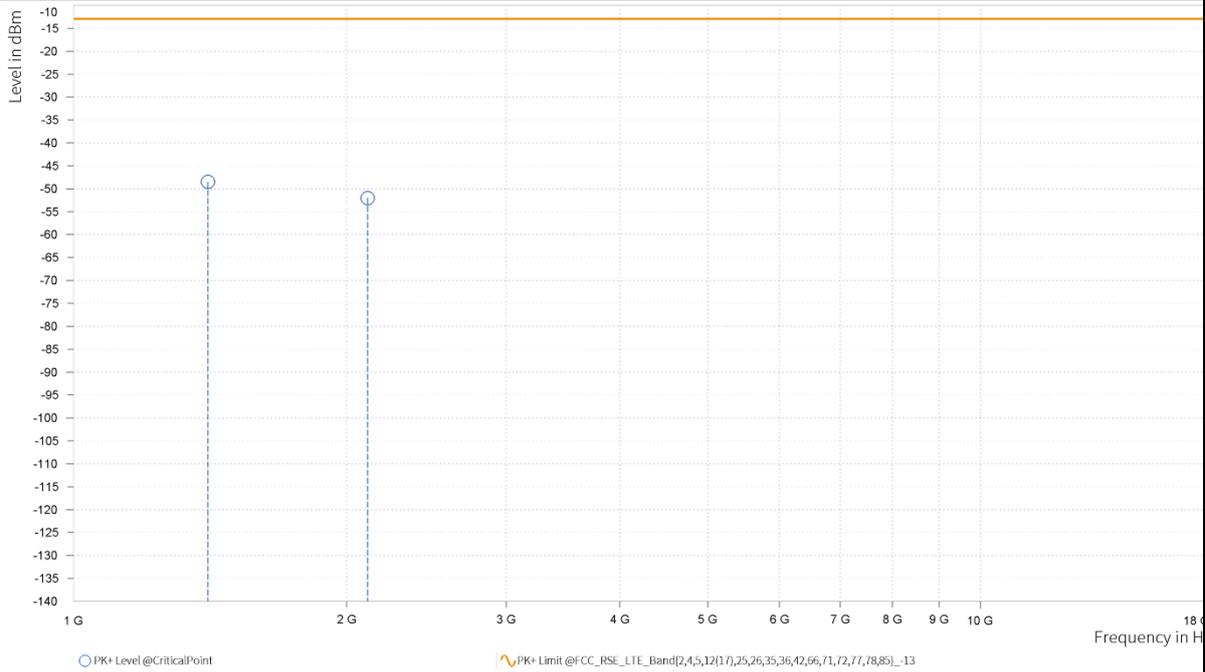




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 23095 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,406.000       | -48.50          | -13.00          | 35.50           | 13.52           | H            | 183.9         | 2.00               |
| 2  | 2,109.000       | -52.02          | -13.00          | 39.02           | 18.95           | H            | 67.2          | 2.00               |

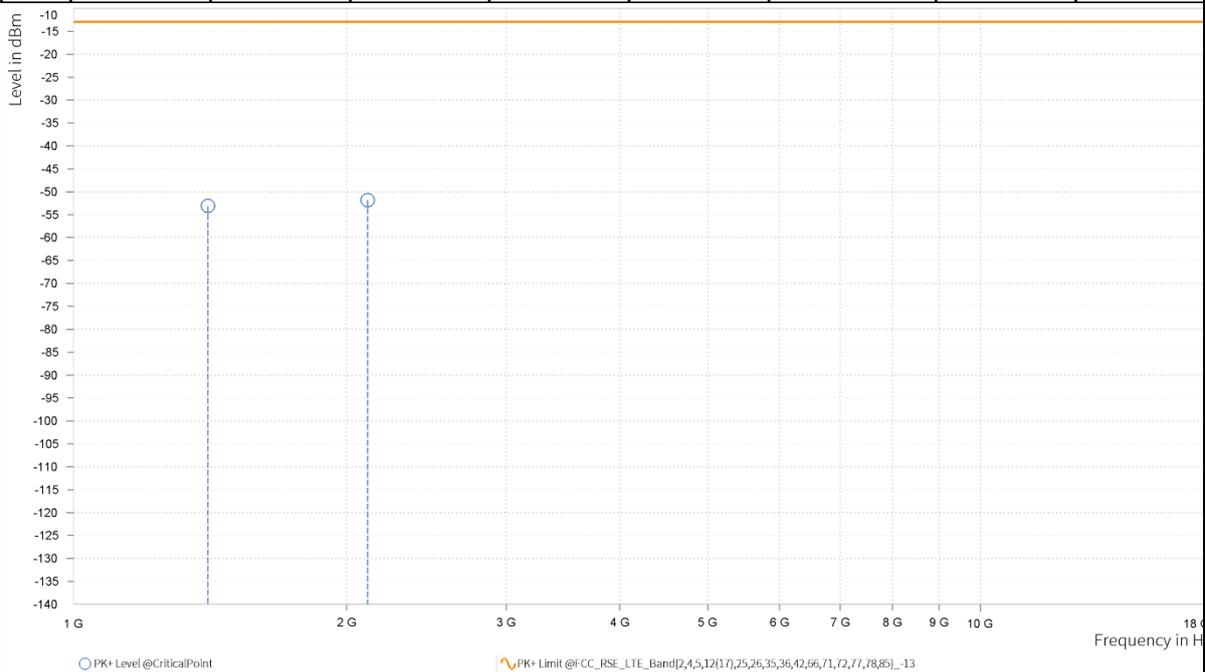




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 10MHz / QPSK  | <b>MODE</b>                     | TX channel 23095 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,406.000       | -53.10          | -13.00          | 40.10           | 13.64           | V            | 352.3         | 1.00               |
| 2  | 2,109.000       | -51.80          | -13.00          | 38.80           | 19.65           | V            | 85.5          | 2.00               |

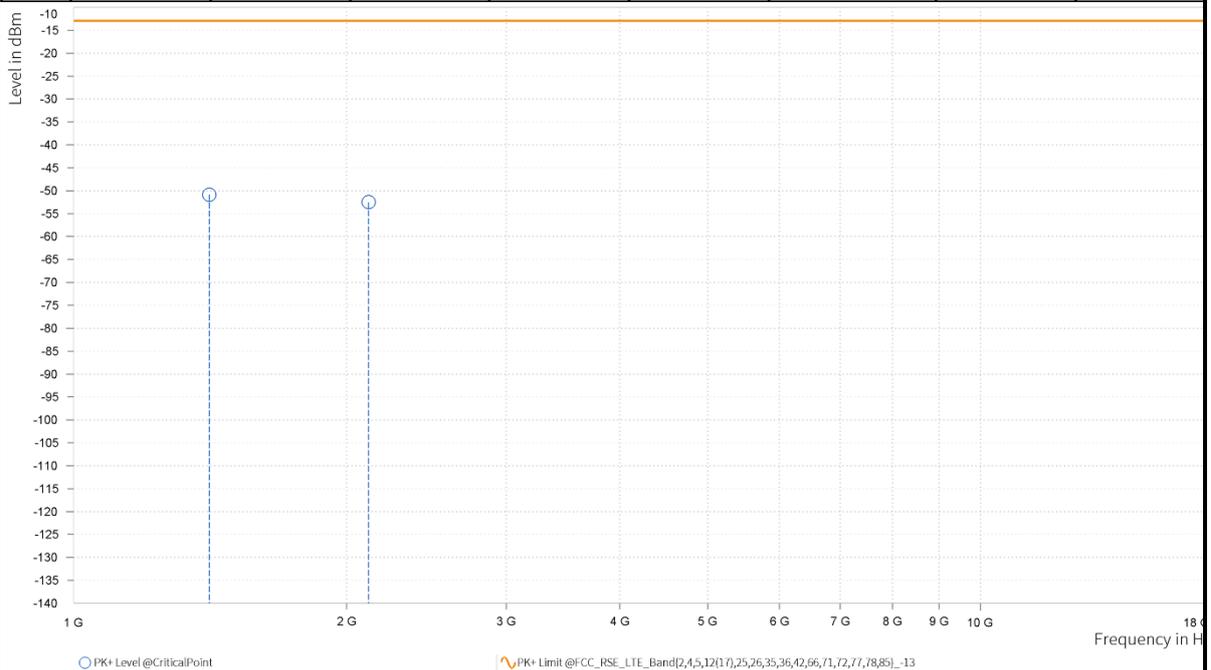




| LTE BAND 12 ANT1         |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23095 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,410.500       | -50.85          | -13.00          | 37.85           | 13.71           | H            | 348           | 1.00               |
| 2  | 2,115.750       | -52.52          | -13.00          | 39.52           | 18.99           | H            | 1             | 1.00               |

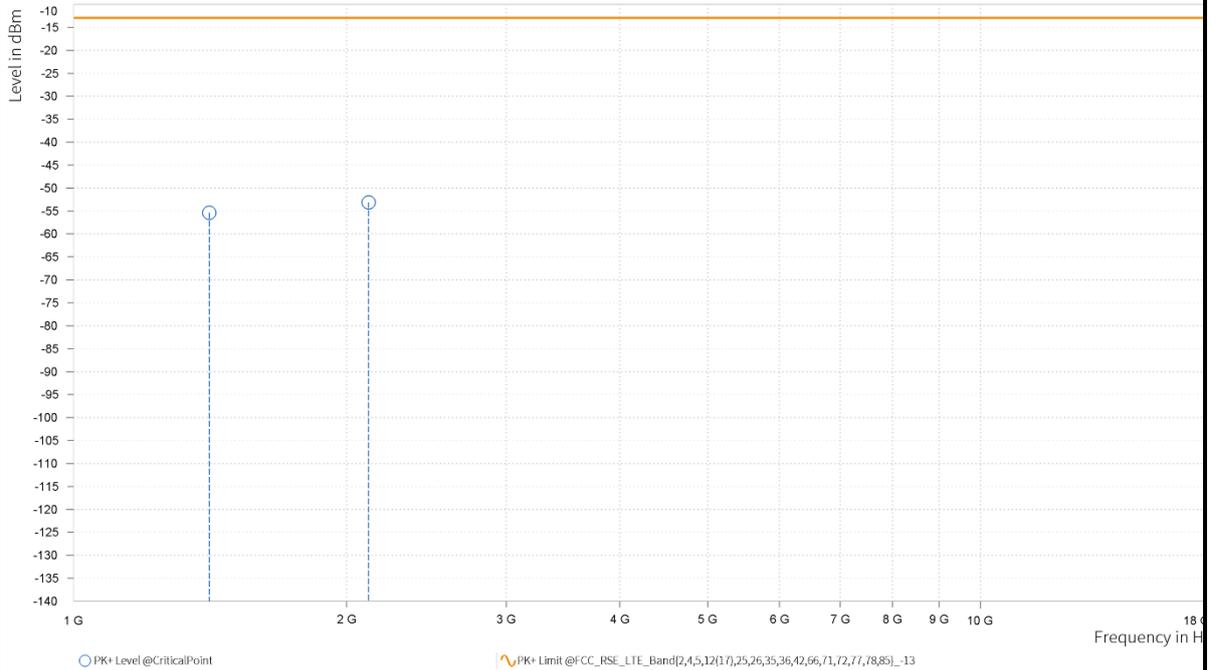




|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23095 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,410.500       | -55.39          | -13.00          | 42.39           | 13.53           | V            | 1             | 1.00               |
| 2  | 2,115.750       | -53.11          | -13.00          | 40.11           | 19.63           | V            | 125.9         | 2.00               |

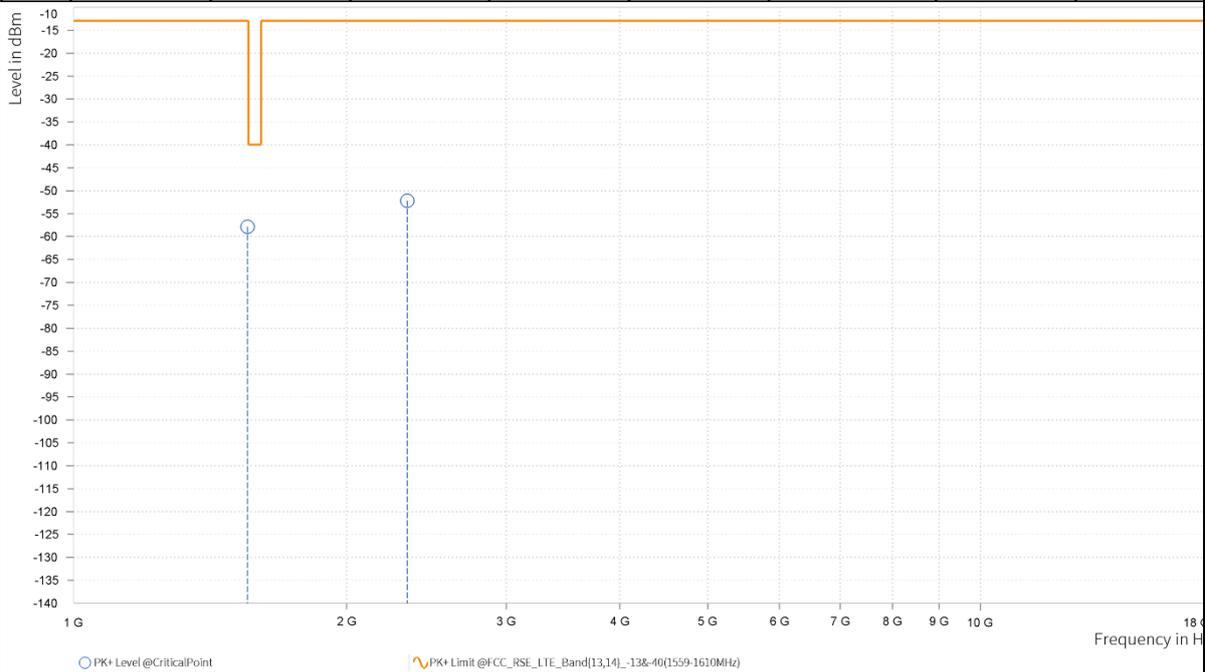




| LTE B13 ANT0             |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23025 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,554.500       | -57.84          | -13.00          | 44.84           | 12.80           | H            | 1.9           | 2.00               |
| 3  | 2,331.750       | -52.17          | -13.00          | 39.17           | 19.34           | H            | 1.3           | 2.00               |





|                          |               |                                 |                  |
|--------------------------|---------------|---------------------------------|------------------|
| <b>CHANNEL BANDWIDTH</b> | 5MHz / QPSK   | <b>MODE</b>                     | TX channel 23025 |
| <b>FREQUENCY RANGE</b>   | Above 1000MHz | <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  |
| <b>INPUT POWER</b>       | 120Vac 60HZ   | <b>TESTED BY</b>                | Hanwen Xu        |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 2  | 1,554.500       | -57.26          | -13.00          | 44.26           | 14.13           | V            | 34.5          | 1.00               |
| 3  | 2,331.750       | -49.37          | -13.00          | 36.37           | 19.95           | V            | 190.9         | 1.00               |

