



Test Report No.: W7L-P23070009-2RF04



Certificate #6613.01

# VARIANT FCC TEST REPORT (PART 27)



|            |   |
|------------|---|
| Applicant: | SIMCom Wireless Solutions Limited                     |
| Address:   | Building 3, No.289 Linhong Road Shanghai China 200335 |

|                           |   |
|---------------------------|---|
| Manufacturer or Supplier: | SIMCom Wireless Solutions Limited                     |
| Address:                  | Building 3, No.289 Linhong Road Shanghai China 200335 |
| Product:                  | SIM7672NA   |
| Brand Name:               | SIMCom  |
| Model Name:               | SIM7672NA   |
| FCC ID:                   | 2AJYU-8XS0003   |
| Date of tests:            | Aug. 22, 2023 ~ Nov. 01, 2023                         |

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

- FCC Part 27     ANSI/TIA/EIA-603-D
- FCC Part 2     ANSI/TIA/EIA-603-E     ANSI C63.26-2015

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

|  |   |
|--|---|
| Prepared by Chao Wu<br>Engineer / Mobile Department  | Approved by Peibo Sun<br>Manager / Mobile Department  |
| <br>Date: Nov. 01, 2023 | <br>Date: Nov. 01, 2023 |

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## RELEASE CONTROL RECORD

| ISSUE NO.           | REASON FOR CHANGE   | DATE ISSUED   |
|---------------------|---|---------------|
| W7L-P23070009RF04   | Original release  | Sep. 11, 2023 |
| W7L-P23070009-2RF04 | Based on the original report product changing the model name and FCC ID, add LTE Band 14, remove LTE Band 7/25/26/38/41, The new sample verify LTE Band 66 RSE worse case of channel bandwidth 10MHz. | Nov. 01, 2023 |

# 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                 |
| §2.1046                                 | Conducted Output Power  | See note               |
| §27.50(d)(4)<br>§27.50(h)(2)            | Equivalent Isotropically Radiated Power<br>(Band 4) (Band 38) (Band 41) (Band 66) | See note               |
| §2.1055<br>§27.54                       | Frequency Stability   | See note               |
| §2.1049                                 | Occupied Bandwidth  | See note               |
| §2.1051<br>§27.53(h)<br>§27.53(m)(4)(6) | Conducted Band Edge Measurements<br>(Band 4) (Band 38) (Band 41) (Band 66)        | See note               |
| §2.1051<br>§27.53(h)<br>§27.53(m)(4)(6) | Conducted Spurious Emissions<br>(Band 4) (Band 38) (Band 41) (Band 66)            | See note               |
| §2.1053<br>§27.53(h)<br>§27.53(m)(4)(6) | Radiated Spurious Emissions<br>(Band 4) (Band 38) (Band 41) (Band 66)             | See note<br>Compliance |
| §27.50(k)(4)<br>§27.50(d)(5)            | Peak to average ratio   | See note               |

**Note:**

1. This report refers to the data of W7L-P23070009RF04 (FCC ID: 2AJYU-8XS0001, model: SIM7672G) .

2. List of the verified results (worse case) in the test item as follows

| Test Item / Report No.                | W7L-P23070009RF04(see Note 2)   | W7L-P23070009-2RF04           |
|---------------------------------------|---------------------------------|-------------------------------|
| Radiated Emission Test (30MHz ~ 1GHz) | Margin: -26.78dB                | Margin:47.19dB                |
| Radiated Emission Test (Above 1GHz)   | LTE Band 66<br>Margin: -33.24dB | LTE Band 66<br>Margin:37.28dB |

Remark:

- All validation data are within increase of below to 3 dB, the result is better than original data.
- The worst case data was verified based on the frequency bands that two models both supported.



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**\*Test Lab Information Reference**

**Lab :**

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

**Lab Address:**

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

**Accredited Test Lab Cert 6613.01**

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

**Lab :**

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

**Lab Address:**

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park,  
Nanshan District, Shenzhen, Guangdong, China

**Accredited Test Lab Cert 3939.01**

The FCC Site Registration No. is 525120; The Designation No. is CN1171.



### 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.



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## 1.2 TEST SITE AND INSTRUMENTS

| Equipment                             | Manufacturer               | Model No.            | Serial No.                | Last Cal. | Next Cal. |
|---------------------------------------|----------------------------|----------------------|---------------------------|-----------|-----------|
| Pre-Amplifier                         | R&S                        | SCU18F1              | 100815                    | Aug.30,22 | Aug.29,24 |
| Pre-Amplifier                         | R&S                        | SCU08F1              | 101028                    | Sep.16,22 | Sep.15,24 |
| Vector Signal Generator               | R&S                        | SMBV100B             | 102176                    | Feb.16,22 | Feb.15,24 |
| Signal Generator                      | R&S                        | SMB100A              | 182185                    | Feb.16,22 | Feb.15,24 |
| 3m Fully-anechoic Chamber             | TDK                        | 9m*6m*6m             | HRSW-SZ-E<br>MC-01Chamber | Nov.25,22 | Nov.24,25 |
| 3m Semi-anechoic Chamber              | TDK                        | 9m*6m*6m             | HRSW-SZ-E<br>MC-02Chamber | Nov.25,22 | Nov.24,25 |
| EMI TEST Receiver                     | R&S                        | ESR26                | 101734                    | Feb.25,22 | Feb.24,24 |
| EMI TEST Receiver                     | R&S                        | ESW44                | 101973                    | Feb.25,22 | Feb.24,24 |
| Bilog Antenna                         | SCHWARZBECK                | VULB 9163            | 1264                      | Feb.28,22 | Feb.27,24 |
| Horn Antenna                          | ETS-LINDGREN               | 3117                 | 227836                    | Aug.22,22 | Aug.21,24 |
| Horn Antenna<br>(18GHz-40GHz)         | Steatite Q-par<br>Antennas | QMS 00880            | 23486                     | Feb.23,22 | Feb.22,24 |
| Horn Antenna                          | Steatite Q-par<br>Antennas | QMS 00208            | 23485                     | Aug.22,22 | Aug.21,24 |
| Loop Antenna                          | SCHWARZ                    | HFH2-Z2/Z2E          | 100976                    | Feb.23,22 | Feb.22,24 |
| WIDEBANDRADIO<br>COMMUNICATION TESTER | R&S                        | CMW500               | 169399                    | Jun.27,22 | Jun.26,24 |
| Test Software                         | EMC32                      | EMC32                | N/A                       | N/A       | N/A       |
| Test Software                         | ELEKTRA                    | ELEKTRA4.32          | N/A                       | N/A       | N/A       |
| Open Switch and Control<br>Unit       | R&S                        | OSP220               | 101964                    | Oct.01,22 | Sep.30,24 |
| DC Source                             | HYELEC                     | HY3010B              | 551016                    | Aug.31,22 | Aug.30,24 |
| Hygrothermograph<br>PC                | DELI                       | 20210528             | SZ014                     | Sep.06,22 | Sep.05,24 |
|                                       | LENOVO                     | E14                  | HRSW0024                  | N/A       | N/A       |
| TMC-AMI18843A(CABLE)                  | R&S                        | HF290-NMNM<br>-7.00M | N/A                       | N/A       | N/A       |
| TMC-AMI18843A(CABLE)                  | R&S                        | HF290-NMNM<br>-4.00M | N/A                       | N/A       | N/A       |
| CABLE                                 | R&S                        | W13.02               | N/A                       | Apr.28,23 | Oct.27,23 |
| CABLE                                 | R&S                        | W13.02               | N/A                       | Oct.27,23 | Apr.26,24 |
| CABLE                                 | R&S                        | W12.14               | N/A                       | Apr.28,23 | Oct.27,23 |
| CABLE                                 | R&S                        | W12.14               | N/A                       | Oct.27,23 | Apr.26,24 |
| CABLE                                 | R&S                        | J12J103539-0<br>0-1  | SEP-03-20-<br>069         | Apr.28,23 | Oct.27,23 |
| CABLE                                 | R&S                        | J12J103539-0<br>0-1  | SEP-03-20-<br>069         | Oct.27,23 | Apr.26,24 |
| CABLE                                 | R&S                        | J12J103539-0<br>0-1  | SEP-03-20-<br>070         | Apr.28,23 | Oct.27,23 |
| CABLE                                 | R&S                        | J12J103539-0<br>0-1  | SEP-03-20-<br>070         | Oct.27,23 | Apr.26,24 |
| Temperature Chamber                   | votsch                     | VT4002               | 5856607810<br>0050        | May.31,22 | May.30,24 |



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- NOTE:**
1. The calibration interval of the above test instruments is 6 months or 12 months or 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.

| Equipment                             | Manufacturer  | Model No.                   | Serial No.                  | Last Cal.   | Next Cal.  |
|---------------------------------------|---------------|-----------------------------|-----------------------------|-------------|------------|
| MXE EMI Receiver                      | KEYSIGHT      | N9038A-544                  | MY54450026                  | Mar. 28,23  | Mar. 27,24 |
| EXA Signal Analyzer                   | KEYSIGHT      | N9010A-544                  | MY54510355                  | May.10,23   | May.09,24  |
| Loop Antenna                          | Schwarzbeck   | FMZB 1519B                  | 00173                       | Sep.03,22   | Sep.02,23  |
| Loop Antenna                          | Schwarzbeck   | FMZB 1519B                  | 00173                       | Sep.02,23   | Sep.01,24  |
| Bilog Antenna                         | ETS-LINDGRE N | 3143B                       | 00161965                    | Feb. 18,23  | Feb. 17,24 |
| Horn Antenna                          | ETS-LINDGRE N | 3117                        | 00168692                    | Feb. 18,23  | Feb. 17,24 |
| Horn Antenna (18GHz-40GHz)            | N/A           | QWH-SL-18-40-K-SG/QMS-00361 | 15433                       | Sep.04, 22  | Sep.03, 23 |
| Horn Antenna (18GHz-40GHz)            | N/A           | QWH-SL-18-40-K-SG/QMS-00361 | 15433                       | Sep.03, 23  | Sep.02, 24 |
| Radio Communication Analyzer          | ANRITSU       | MT8820C                     | 6201465426                  | Feb. 14,23  | Feb. 13,24 |
| Signal Pre-Amplifier                  | EMSI          | EMC 9135                    | 980249                      | May. 06,23  | May. 05,24 |
| Signal Pre-Amplifier                  | EMSI          | EMC 012645B                 | 980257                      | May.10,23   | May.09,24  |
| Signal Pre-Amplifier                  | EMSI          | EMC 184045B                 | 980259                      | Feb. 17,23  | Feb.16,24  |
| 3m Semi-anechoic Chamber              | ETS-LINDGRE N | 9m*6m*6m                    | Euroshieldpn-CT0001143-1216 | May. 22, 23 | May. 21,26 |
| Test Software                         | E3            | V 9.160323                  | N/A                         | N/A         | N/A        |
| Test Software                         | JS1120        | 3.1.36                      | N/A                         | N/A         | N/A        |
| 10dB Attenuator                       | JFW/USA       | 50HF-010-SMA                | 50HF-010-SMA                | May. 06,23  | May. 05,24 |
| Power Meter                           | Anritsu       | ML2495A                     | 1506002                     | Feb. 14,23  | Feb. 13,24 |
| Power Sensor                          | Anritsu       | MA2411B                     | 1339352                     | Feb. 14,23  | Feb. 13,24 |
| Temperature Chamber                   | ESPEC         | SH-242                      | 93000855                    | May. 06,23  | May. 05,24 |
| MXG Analog Microwave Signal Generator | KEYSIGHT      | N5183A                      | MY50143024                  | Feb. 14,23  | Feb. 13,24 |
| Base station R&S CMW500               | Rohde&Schwarz | CMW500                      | 153085                      | May.10,23   | May.09,24  |
| DC Source                             | Kikusui/JP    | PMX18-5A                    | N/A                         | Aug. 11,23  | Aug. 10,24 |

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 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 525120; The Designation No. is CN1171.



## 2 GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

|  |  |   |          |
|--|--|---|----------|
| <b>PRODUCT*</b>                        | SIM7672NA                                |   |          |
| <b>BRAND NAME*</b>                     | SIMCom                                   |   |          |
| <b>MODEL NAME*</b>                     | SIM7672NA                                |   |          |
| <b>NOMINAL VOLTAGE*</b>                | EUT 3.8V                                 |   |          |
| <b>MODULATION TECHNOLOGY*</b>          | LTE                                      | QPSK, 16QAM                             |          |
| <b>FREQUENCY RANGE</b>                 | LTE Band 4<br>Channel Bandwidth: 1.4MHz  | 1710.7MHz ~ 1754.3MHz                   |          |
|  | LTE Band 4<br>Channel Bandwidth: 3MHz    | 1711.5MHz ~ 1753.5MHz                   |          |
|  | LTE Band 4<br>Channel Bandwidth: 5MHz    | 1712.5MHz ~ 1752.5MHz                   |          |
|  | LTE Band 4<br>Channel Bandwidth: 10MHz   | 1715MHz ~ 1750MHz                       |          |
|  | LTE Band 4<br>Channel Bandwidth: 15MHz   | 1717.5MHz ~ 1747.5 MHz                  |          |
|  | LTE Band 4<br>Channel Bandwidth: 20MHz   | 1720MHz ~ 1745MHz                       |          |
|  | LTE Band 66<br>Channel Bandwidth: 1.4MHz | 1710.7MHz ~ 1779.3MHz                   |          |
|  | LTE Band 66<br>Channel Bandwidth: 3MHz   | 1711.5MHz ~ 1778.5MHz                   |          |
|  | LTE Band 66<br>Channel Bandwidth: 5MHz   | 1712.5MHz ~ 1777.5MHz                   |          |
|  | LTE Band 66<br>Channel Bandwidth: 10MHz  | 1715MHz ~ 1775MHz                       |          |
|  | LTE Band 66<br>Channel Bandwidth: 15MHz  | 1717.5MHz ~ 1772.5MHz                   |          |
|  | LTE Band 66<br>Channel Bandwidth: 20MHz  | 1720MHz ~ 1770MHz                       |          |
|  | <b>MAX. EIRP POWER</b>                   | LTE Band 4<br>Channel Bandwidth: 1.4MHz | 331.89mW |
|  |  | LTE Band 4<br>Channel Bandwidth: 3MHz   | 334.97mW |
| LTE Band 4<br>Channel Bandwidth: 5MHz  |  | 334.97mW                                |          |
| LTE Band 4<br>Channel Bandwidth: 10MHz |  | 335.74mW                                |          |
| LTE Band 4<br>Channel Bandwidth: 15MHz |  | 331.89mW                                |          |



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|                     |   |                                 |
|---------------------|---|---------------------------------|
|                     | LTE Band 4<br>Channel Bandwidth: 20MHz  | 336.51mW                        |
|                     | LTE Band 66<br>Channel Bandwidth: 1.4MHz  | 353.18mW                        |
|                     | LTE Band 66<br>Channel Bandwidth: 3MHz  | 354mW                           |
|                     | LTE Band 66<br>Channel Bandwidth: 5MHz  | 358.92mW                        |
|                     | LTE Band 66<br>Channel Bandwidth: 10MHz   | 358.92mW                        |
|                     | LTE Band 66<br>Channel Bandwidth: 15MHz   | 359.75mW                        |
|                     | LTE Band 66<br>Channel Bandwidth: 20MHz   | 361.41mW                        |
| EMISSION DESIGNATOR | LTE Band 66<br>Channel Bandwidth: 1.4MHz  | QPSK: 1M09G7D<br>16QAM: 1M10W7D |
|                     | LTE Band 66<br>Channel Bandwidth: 3MHz  | QPSK: 2M71G7D<br>16QAM: 2M72W7D |
|                     | LTE Band 66<br>Channel Bandwidth: 5MHz  | QPSK: 4M52G7D<br>16QAM: 4M51W7D |
|                     | LTE Band 66<br>Channel Bandwidth: 10MHz   | QPSK: 8M99G7D<br>16QAM: 4M88W7D |
|                     | LTE Band 66<br>Channel Bandwidth: 15MHz   | QPSK: 13M5G7D<br>16QAM: 4M88W7D |
|                     | LTE Band 66<br>Channel Bandwidth: 20MHz   | QPSK: 18M0G7D<br>16QAM: 4M89W7D |
| ANTENNA TYPE*       | Monopole Antenna with 2.12dBi gain for LTE B4<br>Monopole Antenna with 2.12dBi gain for LTE B66 |                                 |
| HW VERSION*         | V2.02   |                                 |
| SW VERSION*         | SIM7672M5A  |                                 |
| I/O PORTS*          | Refer to user's manual  |                                 |



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|                             |             |
|-----------------------------|-------------|
| <b>CABLE SUPPLIED*</b>      | N/A         |
| <b>EXTREME TEMPERATURE*</b> | -10-55 °C   |
| <b>EXTREME VOLTAGE*</b>     | 3.2V - 4.2V |

**NOTE:**

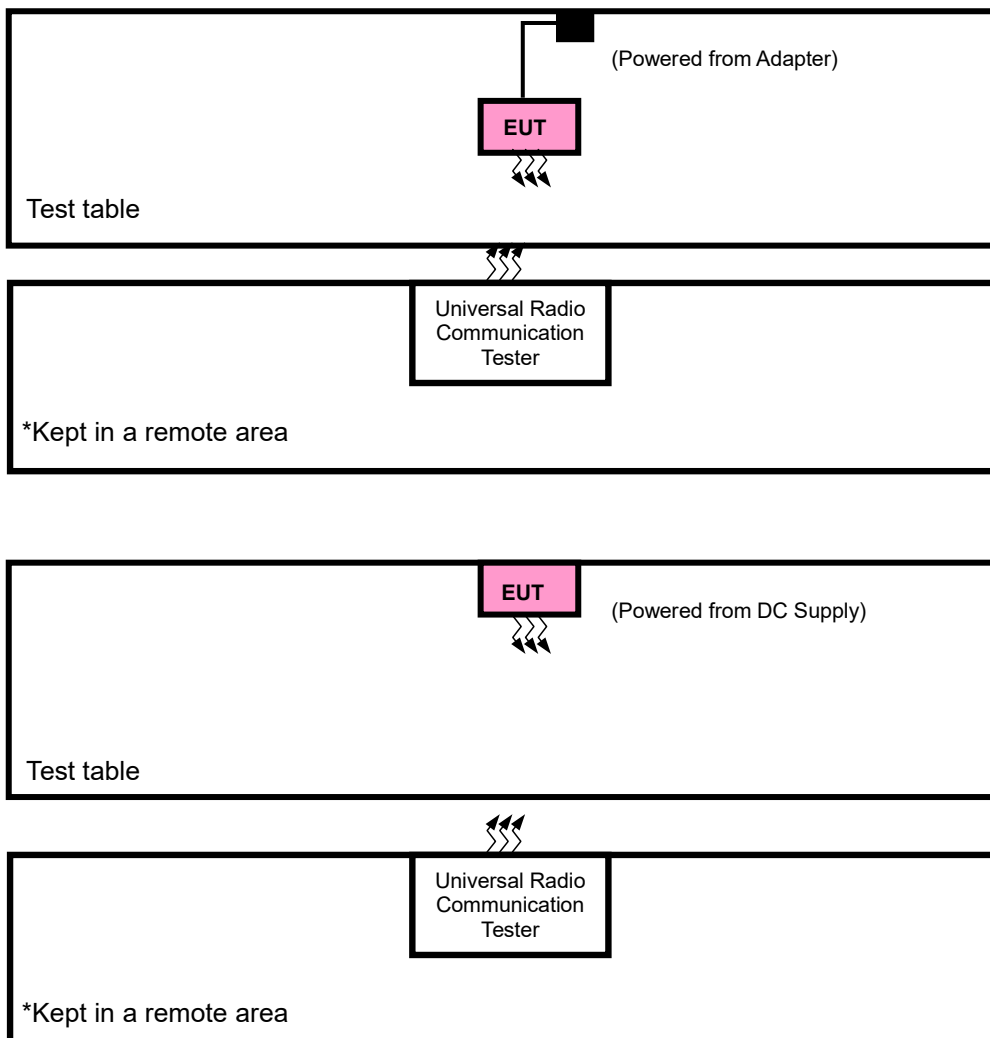
1. \*Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information , Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.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

| <b>MODULATION MODE</b> | <b>TX FUNCTION</b> |
|------------------------|--------------------|
| <b>LTE</b>             | <b>1TX/1RX</b>     |

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

## 2.2 CONFIGURATION OF SYSTEM UNDER TEST

### FOR RADIATION EMISSION TEST



## 2.3 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   | DC source | HYELEC | HY3010B   | 551016     | N/A    |
| 2   | Adapter   | N/A    | N/A       | N/A        | N/A    |

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

## 2.4 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 LTE link   |
| B                  | EUT + DC Supply with LTE link |

### LTE BAND 4 MODE

| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL      | CHANNEL BANDWIDTH | MODULATION | MODE               |
|--------------------|-----------|-------------------|---------------------|-------------------|------------|--------------------|
| A                  | EIRP      | 19957 to 20393    | 19957, 20175, 20393 | 1.4MHz            | QPSK,16QAM | 1 RB / 0 RB Offset |
|                    |           | 19965 to 20385    | 19965, 20175, 20385 | 3MHz              | QPSK,16QAM | 1 RB / 0 RB Offset |
|                    |           | 19975 to 20375    | 19975, 20175, 20375 | 5MHz              | QPSK,16QAM | 1 RB / 0 RB Offset |
|                    |           | 20000 to 20350    | 20000, 20175, 20350 | 10MHz             | QPSK,16QAM | 1 RB / 0 RB Offset |
|                    |           | 20025 to 20325    | 20025, 20175, 20325 | 15MHz             | QPSK,16QAM | 1 RB / 0 RB Offset |
|                    |           | 20050 to 20300    | 20050, 20175, 20300 | 20MHz             | QPSK,16QAM | 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 4 are covered by LTE Band 66, Because it is a subset of LTE Band 66 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE Band 66



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**LTE BAND 66 MODE**

| EUT CONFIGURE MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL       | CHANNEL BANDWIDTH | MODULATION | MODE   |
|--------------------|-----------------------|-------------------|----------------------|-------------------|------------|--|
| A                  | EIRP                  | 131979 to 132665  | 131979,132322,132665 | 1.4MHz            | QPSK,16QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 131987 to 132657  | 131987,132322,132657 | 3MHz              | QPSK,16QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 131997 to 132647  | 131997,132322,132647 | 5MHz              | QPSK,16QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 132022 to 132622  | 132022,132322,132622 | 10MHz             | QPSK,16QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 132047 to 132597  | 132047,132322,132597 | 15MHz             | QPSK,16QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 132072 to 132572  | 132072,132322,132572 | 20MHz             | QPSK,16QAM | 1 RB / 0 RB Offset                           |
| B                  | FREQUENCY STABILITY   | 132072 to 132572  | 132072,132322,132572 | 20MHz             | QPSK,16QAM | 1 RB / 0 RB Offset                           |
| A                  | OCCUPIED BANDWIDTH    | 131979 to 132665  | 131979,132322,132665 | 1.4MHz            | QPSK,16QAM | Full RB / 0 RB Offset                        |
|                    |                       | 131987 to 132657  | 131987,132322,132657 | 3MHz              | QPSK,16QAM | Full RB / 0 RB Offset                        |
|                    |                       | 131997 to 132647  | 131997,132322,132647 | 5MHz              | QPSK,16QAM | Full RB / 0 RB Offset                        |
|                    |                       | 132022 to 132622  | 132022,132322,132622 | 10MHz             | QPSK,16QAM | Full RB / 0 RB Offset                        |
|                    |                       | 132047 to 132597  | 132047,132322,132597 | 15MHz             | QPSK,16QAM | Full RB / 0 RB Offset                        |
|                    |                       | 132072 to 132572  | 132072,132322,132572 | 20MHz             | QPSK,16QAM | Full RB / 0 RB Offset                        |
| A                  | PEAK TO AVERAGE RATIO | 132072 to 132572  | 132072,132322,132572 | 20MHz             | QPSK,16QAM | Full RB / 0 RB Offset                        |
| A                  | BAND EDGE             | 131979 to 132322  | 131979               | 1.4MHz            | QPSK,16QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       |                   | 132322               | 1.4MHz            | QPSK,16QAM | 1 RB / 5 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       | 131987 to 132657  | 131987               | 3MHz              | QPSK,16QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       |                   | 132657               | 3MHz              | QPSK,16QAM | 1 RB / 14 RB Offset<br>Full RB / 0 RB Offset |
|                    |                       | 131997 to 132647  | 131997               | 5MHz              | QPSK,16QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       |                   | 132647               | 5MHz              | QPSK,16QAM | 1 RB / 24 RB Offset<br>Full RB / 0 RB Offset |
|                    |                       | 132022 to 132622  | 132022               | 10MHz             | QPSK,16QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       |                   | 132622               | 10MHz             | QPSK,16QAM | 1 RB / 49 RB Offset<br>Full RB / 0 RB Offset |
|                    |                       | 132047 to 132597  | 132047               | 15MHz             | QPSK,16QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |



BUREAU  
VERITAS

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|   |                    |                  |                      |        |             |                       |
|---|--------------------|------------------|----------------------|--------|-------------|-----------------------|
|   |                    |                  | 132597               | 15MHz  | QPSK, 16QAM | 1 RB / 74 RB Offset   |
|   |                    |                  |                      |        |             | Full RB / 0 RB Offset |
|   |                    | 132072 to 132572 | 132072               | 20MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset    |
|   |                    |                  | 132572               | 20MHz  | QPSK, 16QAM | Full RB / 0 RB Offset |
| A | CONDCUDED EMISSION | 131979 to 132665 | 131979,132322,132665 | 1.4MHz | QPSK, 16QAM | 1 RB / 0 RB Offset    |
|   |                    | 131987 to 132657 | 131987,132322,132657 | 3MHz   | QPSK, 16QAM | 1 RB / 0 RB Offset    |
|   |                    | 131997 to 132647 | 131997,132322,132647 | 5MHz   | QPSK, 16QAM | 1 RB / 0 RB Offset    |
|   |                    | 132022 to 132622 | 132022,132322,132622 | 10MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset    |
|   |                    | 132047 to 132597 | 132047,132322,132597 | 15MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset    |
|   |                    | 132072 to 132572 | 132072,132322,132572 | 20MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset    |
| A | RADIATED EMISSION  | 131979 to 132665 | 132322               | 1.4MHz | QPSK        | 1 RB / 0 RB Offset    |
|   |                    | 131987 to 132657 | 132322               | 3MHz   | QPSK        | 1 RB / 0 RB Offset    |
|   |                    | 131997 to 132647 | 132322               | 5MHz   | QPSK        | 1 RB / 0 RB Offset    |
|   |                    | 132022 to 132622 | 132022,132322,132622 | 10MHz  | QPSK        | 1 RB / 0 RB Offset    |
|   |                    | 132047 to 132597 | 132322               | 15MHz  | QPSK        | 1 RB / 0 RB Offset    |
|   |                    | 132072 to 132572 | 132322               | 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.



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**TEST CONDITION:**

| TEST ITEM             | ENVIRONMENTAL CONDITIONS | INPUT POWER                    | TESTED BY |
|-----------------------|--------------------------|--------------------------------|-----------|
| ERP&EIRP              | 23deg. C, 70%RH          | EUT 3.8V                       | Jace Hu   |
| FREQUENCY STABILITY   | 23deg. C, 70%RH          | DC 3.2V/3.8V/4.2V By DC Supply | James Fu  |
| OCCUPIED BANDWIDTH    | 23deg. C, 70%RH          | EUT 3.8V                       | James Fu  |
| BAND EDGE             | 23deg. C, 70%RH          | EUT 3.8V                       | James Fu  |
| CONDCUDETED EMISSION  | 23deg. C, 70%RH          | EUT 3.8V                       | James Fu  |
| RADIATED EMISSION     | 23deg. C, 70%RH          | EUT 3.8V                       | Jace Hu   |
| PEAK TO AVERAGE RATIO | 23deg. C, 70%RH          | EUT 3.8V                       | James Fu  |





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## 2.5 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

##### 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:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

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;

$G_{\text{T}}$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

$L_{\text{C}}$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

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

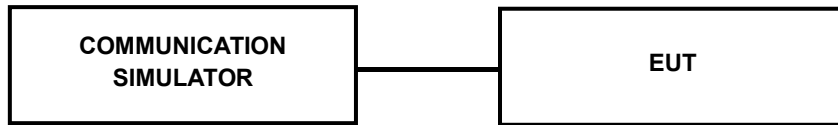
- a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



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### 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)

LTE Band 4

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>19957         | Mid CH<br>20175         | High CH<br>20393        |
|---------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|
|         |            |         |           | Frequency<br>1710.7 MHz | Frequency<br>1732.5 MHz | Frequency<br>1754.3 MHz |
| 4/ 1.4  | QPSK       | 1       | 0         | 22.97                   | 23.04                   | 22.42                   |
|         |            | 1       | 2         | 23.09                   | 22.70                   | 23.07                   |
|         |            | 1       | 5         | 22.81                   | 23.02                   | 22.73                   |
|         |            | 3       | 0         | 22.35                   | 22.42                   | 22.30                   |
|         |            | 3       | 1         | 22.38                   | 22.25                   | 22.52                   |
|         |            | 3       | 3         | 22.42                   | 22.34                   | 22.70                   |
|         |            | 6       | 0         | 21.98                   | 22.11                   | 22.15                   |
|         | 16QAM      | 1       | 0         | 22.26                   | 22.44                   | 21.83                   |
|         |            | 1       | 2         | 22.48                   | 22.14                   | 22.44                   |
|         |            | 1       | 5         | 22.04                   | 22.55                   | 22.21                   |
|         |            | 3       | 0         | 22.48                   | 22.66                   | 22.14                   |
|         |            | 3       | 1         | 22.53                   | 22.38                   | 22.56                   |
|         |            | 3       | 3         | 22.41                   | 22.64                   | 22.62                   |
|         |            | 6       | 0         | 21.12                   | 21.29                   | 20.92                   |

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>19965         | Mid CH<br>20175         | High CH<br>20385        |
|---------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|
|         |            |         |           | Frequency<br>1711.5 MHz | Frequency<br>1732.5 MHz | Frequency<br>1753.5 MHz |
| 4/ 3    | QPSK       | 1       | 0         | 22.96                   | 23.00                   | 22.42                   |
|         |            | 1       | 7         | 23.07                   | 22.69                   | 23.05                   |
|         |            | 1       | 14        | 22.82                   | 23.13                   | 22.76                   |
|         |            | 8       | 0         | 22.01                   | 22.09                   | 21.89                   |
|         |            | 8       | 3         | 22.07                   | 21.85                   | 22.20                   |
|         |            | 8       | 7         | 22.02                   | 21.91                   | 22.29                   |
|         |            | 15      | 0         | 21.96                   | 22.12                   | 22.09                   |
|         | 16QAM      | 1       | 0         | 22.24                   | 22.41                   | 21.80                   |
|         |            | 1       | 7         | 22.39                   | 22.21                   | 22.45                   |
|         |            | 1       | 14        | 22.03                   | 22.58                   | 22.21                   |
|         |            | 8       | 0         | 22.13                   | 22.31                   | 21.66                   |
|         |            | 8       | 3         | 22.10                   | 21.93                   | 22.26                   |
|         |            | 8       | 7         | 22.03                   | 22.24                   | 22.15                   |
|         |            | 15      | 0         | 21.16                   | 21.24                   | 20.87                   |

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>19975         | Mid CH<br>20175         | High CH<br>20375        |
|---------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|
|         |            |         |           | Frequency<br>1712.5 MHz | Frequency<br>1732.5 MHz | Frequency<br>1752.5 MHz |
| 4/ 5    | QPSK       | 1       | 0         | 23.04                   | 23.03                   | 22.48                   |
|         |            | 1       | 12        | 23.13                   | 22.69                   | 23.09                   |
|         |            | 1       | 24        | 22.73                   | 23.06                   | 22.77                   |
|         |            | 12      | 0         | 22.00                   | 22.03                   | 21.88                   |
|         |            | 12      | 6         | 22.00                   | 21.88                   | 22.14                   |
|         |            | 12      | 13        | 21.96                   | 21.97                   | 22.27                   |
|         |            | 25      | 0         | 22.03                   | 22.13                   | 22.11                   |
|         | 16QAM      | 1       | 0         | 22.27                   | 22.50                   | 21.82                   |
|         |            | 1       | 12        | 22.38                   | 22.20                   | 22.52                   |
|         |            | 1       | 24        | 22.13                   | 22.57                   | 22.24                   |
|         |            | 12      | 0         | 22.12                   | 22.22                   | 21.66                   |
|         |            | 12      | 6         | 22.13                   | 21.92                   | 22.25                   |
|         |            | 12      | 13        | 21.95                   | 22.26                   | 22.22                   |
|         |            | 25      | 0         | 21.16                   | 21.30                   | 20.85                   |

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>20000       | Mid CH<br>20175         | High CH<br>20350      |
|---------|------------|---------|-----------|-----------------------|-------------------------|-----------------------|
|         |            |         |           | Frequency<br>1715 MHz | Frequency<br>1732.5 MHz | Frequency<br>1750 MHz |
| 4/ 10   | QPSK       | 1       | 0         | 23.01                 | 23.04                   | 22.41                 |
|         |            | 1       | 24        | 23.08                 | 22.70                   | 23.04                 |
|         |            | 1       | 49        | 22.74                 | 23.14                   | 22.78                 |
|         |            | 25      | 0         | 22.02                 | 22.08                   | 21.89                 |
|         |            | 25      | 12        | 22.06                 | 21.87                   | 22.12                 |
|         |            | 25      | 25        | 21.94                 | 21.91                   | 22.26                 |
|         |            | 50      | 0         | 21.96                 | 22.08                   | 22.11                 |
|         | 16QAM      | 1       | 0         | 22.22                 | 22.46                   | 21.91                 |
|         |            | 1       | 24        | 22.42                 | 22.16                   | 22.47                 |
|         |            | 1       | 49        | 22.05                 | 22.53                   | 22.23                 |
|         |            | 12      | 0         | 22.16                 | 22.25                   | 21.66                 |
|         |            | 12      | 17        | 22.15                 | 21.98                   | 22.21                 |
|         |            | 12      | 36        | 22.06                 | 22.22                   | 22.14                 |
|         |            | 27      | 0         | 21.12                 | 21.33                   | 20.83                 |

| Band/BW | Modulation | RB Size | RB Offset | Low CH 20025         | Mid CH 20175         | High CH 20325        |
|---------|------------|---------|-----------|----------------------|----------------------|----------------------|
|         |            |         |           | Frequency 1717.5 MHz | Frequency 1732.5 MHz | Frequency 1747.5 MHz |
| 4/ 15   | QPSK       | 1       | 0         | 22.94                | 23.02                | 22.39                |
|         |            | 1       | 37        | 23.08                | 22.75                | 23.09                |
|         |            | 1       | 74        | 22.84                | 23.06                | 22.83                |
|         |            | 36      | 0         | 21.95                | 22.00                | 21.85                |
|         |            | 36      | 19        | 21.96                | 21.89                | 22.17                |
|         |            | 36      | 39        | 21.99                | 22.02                | 22.28                |
|         |            | 75      | 0         | 22.05                | 22.03                | 22.08                |
|         | 16QAM      | 1       | 0         | 22.24                | 22.41                | 21.79                |
|         |            | 1       | 37        | 22.46                | 22.12                | 22.46                |
|         |            | 1       | 74        | 22.06                | 22.54                | 22.21                |
|         |            | 12      | 0         | 22.10                | 22.23                | 21.71                |
|         |            | 12      | 30        | 22.14                | 22.00                | 22.19                |
|         |            | 12      | 61        | 22.02                | 22.15                | 22.23                |
|         |            | 27      | 0         | 21.18                | 21.30                | 20.82                |

| Band/BW | Modulation | RB Size | RB Offset | Low CH 20050       | Mid CH 20175         | High CH 20300      |
|---------|------------|---------|-----------|--------------------|----------------------|--------------------|
|         |            |         |           | Frequency 1720 MHz | Frequency 1732.5 MHz | Frequency 1745 MHz |
| 4/ 20   | QPSK       | 1       | 0         | 23.04              | 23.10                | 22.50              |
|         |            | 1       | 50        | 23.15              | 22.80                | 23.14              |
|         |            | 1       | 99        | 22.84              | 23.14                | 22.84              |
|         |            | 50      | 0         | 22.06              | 22.10                | 21.94              |
|         |            | 50      | 25        | 22.08              | 21.95                | 22.23              |
|         |            | 50      | 50        | 22.05              | 22.03                | 22.31              |
|         |            | 100     | 0         | 22.07              | 22.14                | 22.17              |
|         | 16QAM      | 1       | 0         | 22.30              | 22.51                | 21.91              |
|         |            | 1       | 50        | 22.49              | 22.23                | 22.53              |
|         |            | 1       | 99        | 22.15              | 22.58                | 22.32              |
|         |            | 12      | 0         | 22.17              | 22.33                | 21.75              |
|         |            | 12      | 42        | 22.19              | 22.00                | 22.26              |
|         |            | 12      | 86        | 22.06              | 22.27                | 22.24              |
|         |            | 27      | 0         | 21.23              | 21.36                | 20.93              |

LTE Band 66

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>131979       | Mid CH<br>132322     | High CH<br>132665      |
|---------|------------|---------|-----------|------------------------|----------------------|------------------------|
|         |            |         |           | Frequency<br>1710.7MHz | Frequency<br>1745MHz | Frequency<br>1779.3MHz |
| 66/ 1.4 | QPSK       | 1       | 0         | 23.36                  | 22.53                | 22.89                  |
|         |            | 1       | 2         | 23.33                  | 23.08                | 22.27                  |
|         |            | 1       | 5         | 22.93                  | 23.11                | 22.74                  |
|         |            | 3       | 0         | 22.99                  | 22.49                | 22.11                  |
|         |            | 3       | 1         | 22.92                  | 22.86                | 22.11                  |
|         |            | 3       | 3         | 22.79                  | 22.91                | 22.07                  |
|         |            | 6       | 0         | 22.33                  | 22.14                | 21.57                  |
|         | 16QAM      | 1       | 0         | 22.62                  | 21.75                | 22.10                  |
|         |            | 1       | 2         | 22.61                  | 22.45                | 21.80                  |
|         |            | 1       | 5         | 22.27                  | 22.46                | 22.07                  |
|         |            | 3       | 0         | 22.97                  | 22.20                | 22.37                  |
|         |            | 3       | 1         | 22.84                  | 22.71                | 22.04                  |
|         |            | 3       | 3         | 22.73                  | 22.78                | 22.22                  |
|         |            | 6       | 0         | 21.59                  | 20.70                | 20.92                  |

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>131987       | Mid CH<br>132322     | High CH<br>132657      |
|---------|------------|---------|-----------|------------------------|----------------------|------------------------|
|         |            |         |           | Frequency<br>1711.5MHz | Frequency<br>1745MHz | Frequency<br>1778.5MHz |
| 66/ 3   | QPSK       | 1       | 0         | 23.34                  | 22.59                | 22.89                  |
|         |            | 1       | 7         | 23.37                  | 23.15                | 22.36                  |
|         |            | 1       | 14        | 22.89                  | 23.05                | 22.67                  |
|         |            | 8       | 0         | 22.39                  | 21.86                | 21.48                  |
|         |            | 8       | 3         | 22.32                  | 22.23                | 21.41                  |
|         |            | 8       | 7         | 22.20                  | 22.32                | 21.47                  |
|         |            | 15      | 0         | 22.32                  | 22.16                | 21.56                  |
|         | 16QAM      | 1       | 0         | 22.69                  | 21.84                | 22.11                  |
|         |            | 1       | 7         | 22.69                  | 22.46                | 21.75                  |
|         |            | 1       | 14        | 22.27                  | 22.43                | 21.99                  |
|         |            | 8       | 0         | 22.32                  | 21.60                | 21.81                  |
|         |            | 8       | 3         | 22.25                  | 22.15                | 21.54                  |
|         |            | 8       | 7         | 22.13                  | 22.22                | 21.66                  |
|         |            | 15      | 0         | 21.56                  | 20.71                | 20.90                  |

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>131997       | Mid CH<br>132322     | High CH<br>132647      |
|---------|------------|---------|-----------|------------------------|----------------------|------------------------|
|         |            |         |           | Frequency<br>1712.5MHz | Frequency<br>1745MHz | Frequency<br>1777.5MHz |
| 66/ 5   | QPSK       | 1       | 0         | 23.43                  | 22.51                | 22.86                  |
|         |            | 1       | 12        | 23.29                  | 23.11                | 22.34                  |
|         |            | 1       | 24        | 22.91                  | 23.04                | 22.65                  |
|         |            | 12      | 0         | 22.47                  | 21.86                | 21.55                  |
|         |            | 12      | 6         | 22.37                  | 22.19                | 21.48                  |
|         |            | 12      | 13        | 22.24                  | 22.38                | 21.54                  |
|         |            | 25      | 0         | 22.40                  | 22.15                | 21.56                  |
|         | 16QAM      | 1       | 0         | 22.64                  | 21.83                | 22.19                  |
|         |            | 1       | 12        | 22.68                  | 22.47                | 21.72                  |
|         |            | 1       | 24        | 22.28                  | 22.37                | 22.02                  |
|         |            | 12      | 0         | 22.27                  | 21.65                | 21.86                  |
|         |            | 12      | 6         | 22.30                  | 22.13                | 21.44                  |
|         |            | 12      | 13        | 22.18                  | 22.19                | 21.68                  |
|         |            | 25      | 0         | 21.54                  | 20.77                | 20.87                  |

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>132022     | Mid CH<br>132322     | High CH<br>132622    |
|---------|------------|---------|-----------|----------------------|----------------------|----------------------|
|         |            |         |           | Frequency<br>1715MHz | Frequency<br>1745MHz | Frequency<br>1775MHz |
| 66/ 10  | QPSK       | 1       | 0         | 23.43                | 22.60                | 22.82                |
|         |            | 1       | 24        | 23.36                | 23.08                | 22.35                |
|         |            | 1       | 49        | 22.87                | 23.09                | 22.73                |
|         |            | 25      | 0         | 22.47                | 21.91                | 21.57                |
|         |            | 25      | 12        | 22.38                | 22.23                | 21.49                |
|         |            | 25      | 25        | 22.14                | 22.35                | 21.48                |
|         |            | 50      | 0         | 22.38                | 22.13                | 21.53                |
|         | 16QAM      | 1       | 0         | 22.66                | 21.78                | 22.13                |
|         |            | 1       | 24        | 22.63                | 22.41                | 21.80                |
|         |            | 1       | 49        | 22.26                | 22.46                | 22.04                |
|         |            | 12      | 0         | 22.30                | 21.60                | 21.79                |
|         |            | 12      | 17        | 22.32                | 22.14                | 21.48                |
|         |            | 12      | 36        | 22.17                | 22.27                | 21.63                |
|         |            | 27      | 0         | 21.60                | 20.69                | 20.85                |



| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>132047        | Mid CH<br>132322     | High CH<br>132597       |
|---------|------------|---------|-----------|-------------------------|----------------------|-------------------------|
|         |            |         |           | Frequency<br>1717.5 MHz | Frequency<br>1745MHz | Frequency<br>1772.5 MHz |
| 66/ 15  | QPSK       | 1       | 0         | 23.44                   | 22.58                | 22.78                   |
|         |            | 1       | 37        | 23.33                   | 23.04                | 22.32                   |
|         |            | 1       | 74        | 22.86                   | 23.05                | 22.74                   |
|         |            | 36      | 0         | 22.45                   | 21.86                | 21.48                   |
|         |            | 36      | 19        | 22.40                   | 22.23                | 21.41                   |
|         |            | 36      | 39        | 22.19                   | 22.36                | 21.53                   |
|         |            | 75      | 0         | 22.34                   | 22.11                | 21.59                   |
|         | 16QAM      | 1       | 0         | 22.68                   | 21.75                | 22.18                   |
|         |            | 1       | 37        | 22.70                   | 22.38                | 21.74                   |
|         |            | 1       | 74        | 22.23                   | 22.41                | 21.99                   |
|         |            | 12      | 0         | 22.30                   | 21.56                | 21.81                   |
|         |            | 12      | 30        | 22.25                   | 22.18                | 21.48                   |
|         |            | 12      | 61        | 22.22                   | 22.27                | 21.61                   |
|         |            | 27      | 0         | 21.57                   | 20.67                | 20.83                   |

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>132072     | Mid CH<br>132322     | High CH<br>132572    |
|---------|------------|---------|-----------|----------------------|----------------------|----------------------|
|         |            |         |           | Frequency<br>1720MHz | Frequency<br>1745MHz | Frequency<br>1770MHz |
| 66/ 20  | QPSK       | 1       | 0         | 23.46                | 22.62                | 22.90                |
|         |            | 1       | 50        | 23.40                | 23.15                | 22.36                |
|         |            | 1       | 99        | 22.95                | 23.13                | 22.76                |
|         |            | 50      | 0         | 22.50                | 21.92                | 21.57                |
|         |            | 50      | 25        | 22.43                | 22.27                | 21.52                |
|         |            | 50      | 50        | 22.25                | 22.39                | 21.57                |
|         |            | 100     | 0         | 22.40                | 22.16                | 21.59                |
|         | 16QAM      | 1       | 0         | 22.69                | 21.85                | 22.21                |
|         |            | 1       | 50        | 22.70                | 22.48                | 21.82                |
|         |            | 1       | 99        | 22.29                | 22.47                | 22.09                |
|         |            | 12      | 0         | 22.39                | 21.66                | 21.88                |
|         |            | 12      | 42        | 22.33                | 22.19                | 21.55                |
|         |            | 12      | 86        | 22.22                | 22.29                | 21.73                |
|         |            | 27      | 0         | 21.61                | 20.77                | 20.94                |



**BUREAU  
VERITAS**

Test Report No.: W7L-P23070009-2RF04

**EIRP**

**LTE BAND 4**

**CHANNEL BANDWIDTH: 1.4MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 19957   | 1710.7          | 23.09                 | 2.12                                | 25.21      | 331.89    | 1         |
| 20175   | 1732.5          | 23.04                 | 2.12                                | 25.16      | 328.1     | 1         |
| 20393   | 1754.3          | 23.07                 | 2.12                                | 25.19      | 330.37    | 1         |

**CHANNEL BANDWIDTH: 1.4MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 19957   | 1710.7          | 22.53                 | 2.12                                | 24.65      | 291.74    | 1         |
| 20175   | 1732.5          | 22.66                 | 2.12                                | 24.78      | 300.61    | 1         |
| 20393   | 1754.3          | 22.62                 | 2.12                                | 24.74      | 297.85    | 1         |

**CHANNEL BANDWIDTH: 3MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 19965   | 1711.5          | 23.07                 | 2.12                                | 25.19      | 330.37    | 1         |
| 20175   | 1732.5          | 23.13                 | 2.12                                | 25.25      | 334.97    | 1         |
| 20385   | 1753.5          | 23.05                 | 2.12                                | 25.17      | 328.85    | 1         |

**CHANNEL BANDWIDTH: 3MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 19965   | 1711.5          | 22.39                 | 2.12                                | 24.51      | 282.49    | 1         |
| 20175   | 1732.5          | 22.39                 | 2.12                                | 24.51      | 282.49    | 1         |
| 20385   | 1753.5          | 22.13                 | 2.12                                | 24.25      | 266.07    | 1         |



BUREAU  
VERITAS

Test Report No.: W7L-P23070009-2RF04

**CHANNEL BANDWIDTH: 5MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 19975   | 1712.5          | 23.13                 | 2.12                                | 25.25      | 334.97    | 1         |
| 20175   | 1732.5          | 23.06                 | 2.12                                | 25.18      | 329.61    | 1         |
| 20375   | 1752.5          | 23.09                 | 2.12                                | 25.21      | 331.89    | 1         |

**CHANNEL BANDWIDTH: 5MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 19975   | 1712.5          | 22.38                 | 2.12                                | 24.5       | 281.84    | 1         |
| 20175   | 1732.5          | 22.57                 | 2.12                                | 24.69      | 294.44    | 1         |
| 20375   | 1752.5          | 22.52                 | 2.12                                | 24.64      | 291.07    | 1         |

**CHANNEL BANDWIDTH: 10MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20000   | 1715            | 23.08                 | 2.12                                | 25.2       | 331.13    | 1         |
| 20175   | 1732.5          | 23.14                 | 2.12                                | 25.26      | 335.74    | 1         |
| 20350   | 1750            | 23.04                 | 2.12                                | 25.16      | 328.1     | 1         |

**CHANNEL BANDWIDTH: 10MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20000   | 1715            | 22.42                 | 2.12                                | 24.54      | 284.45    | 1         |
| 20175   | 1732.5          | 22.53                 | 2.12                                | 24.65      | 291.74    | 1         |
| 20350   | 1750            | 22.47                 | 2.12                                | 24.59      | 287.74    | 1         |

**CHANNEL BANDWIDTH: 15MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20025   | 1717.5          | 23.08                 | 2.12                                | 25.2       | 331.13    | 1         |
| 20175   | 1732.5          | 23.06                 | 2.12                                | 25.18      | 329.61    | 1         |
| 20325   | 1747.5          | 23.09                 | 2.12                                | 25.21      | 331.89    | 1         |

**CHANNEL BANDWIDTH: 15MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20025   | 1717.5          | 22.46                 | 2.12                                | 24.58      | 287.08    | 1         |
| 20175   | 1732.5          | 22.54                 | 2.12                                | 24.66      | 292.42    | 1         |
| 20325   | 1747.5          | 22.46                 | 2.12                                | 24.58      | 287.08    | 1         |

**CHANNEL BANDWIDTH: 20MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20050   | 1720            | 23.15                 | 2.12                                | 25.27      | 336.51    | 1         |
| 20175   | 1732.5          | 23.14                 | 2.12                                | 25.26      | 335.74    | 1         |
| 20300   | 1745            | 23.14                 | 2.12                                | 25.26      | 335.74    | 1         |

**CHANNEL BANDWIDTH: 20MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20050   | 1720            | 22.49                 | 2.12                                | 24.61      | 289.07    | 1         |
| 20175   | 1732.5          | 22.58                 | 2.12                                | 24.7       | 295.12    | 1         |
| 20300   | 1745            | 22.53                 | 2.12                                | 24.65      | 291.74    | 1         |

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**CHANNEL BANDWIDTH: 1.4MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 131979  | 1710.7          | 23.36                 | 2.12                                | 25.48      | 353.18    | 1         |
| 132322  | 1745            | 23.11                 | 2.12                                | 25.23      | 333.43    | 1         |
| 132665  | 1779.3          | 22.89                 | 2.12                                | 25.01      | 316.96    | 1         |

**CHANNEL BANDWIDTH: 1.4MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 131979  | 1710.7          | 22.97                 | 2.12                                | 25.09      | 322.85    | 1         |
| 132322  | 1745            | 22.78                 | 2.12                                | 24.9       | 309.03    | 1         |
| 132665  | 1779.3          | 22.37                 | 2.12                                | 24.49      | 281.19    | 1         |

**CHANNEL BANDWIDTH: 3MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 131987  | 1711.5          | 23.37                 | 2.12                                | 25.49      | 354       | 1         |
| 132322  | 1745            | 23.15                 | 2.12                                | 25.27      | 336.51    | 1         |
| 132657  | 1778.5          | 22.89                 | 2.12                                | 25.01      | 316.96    | 1         |

**CHANNEL BANDWIDTH: 3MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 131987  | 1711.5          | 22.69                 | 2.12                                | 24.81      | 302.69    | 1         |
| 132322  | 1745            | 22.46                 | 2.12                                | 24.58      | 287.08    | 1         |
| 132657  | 1778.5          | 22.11                 | 2.12                                | 24.23      | 264.85    | 1         |

**CHANNEL BANDWIDTH: 5MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 131997  | 1712.5          | 23.43                 | 2.12                                | 25.55      | 358.92    | 1         |
| 132322  | 1745            | 23.11                 | 2.12                                | 25.23      | 333.43    | 1         |
| 132647  | 1777.5          | 22.86                 | 2.12                                | 24.98      | 314.77    | 1         |

**CHANNEL BANDWIDTH: 5MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 131997  | 1712.5          | 22.68                 | 2.12                                | 24.8       | 302       | 1         |
| 132322  | 1745            | 22.47                 | 2.12                                | 24.59      | 287.74    | 1         |
| 132647  | 1777.5          | 22.19                 | 2.12                                | 24.31      | 269.77    | 1         |

**CHANNEL BANDWIDTH: 10MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 132022  | 1715            | 23.43                 | 2.12                                | 25.55      | 358.92    | 1         |
| 132322  | 1745            | 23.09                 | 2.12                                | 25.21      | 331.89    | 1         |
| 132622  | 1775            | 22.82                 | 2.12                                | 24.94      | 311.89    | 1         |

**CHANNEL BANDWIDTH: 10MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 132022  | 1715            | 22.66                 | 2.12                                | 24.78      | 300.61    | 1         |
| 132322  | 1745            | 22.46                 | 2.12                                | 24.58      | 287.08    | 1         |
| 132622  | 1775            | 22.13                 | 2.12                                | 24.25      | 266.07    | 1         |

**CHANNEL BANDWIDTH: 15MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 132047  | 1717.5          | 23.44                 | 2.12                                | 25.56      | 359.75    | 1         |
| 132322  | 1745            | 23.05                 | 2.12                                | 25.17      | 328.85    | 1         |
| 132597  | 1772.5          | 22.78                 | 2.12                                | 24.9       | 309.03    | 1         |

**CHANNEL BANDWIDTH: 15MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 132047  | 1717.5          | 22.7                  | 2.12                                | 24.82      | 303.39    | 1         |
| 132322  | 1745            | 22.41                 | 2.12                                | 24.53      | 283.79    | 1         |
| 132597  | 1772.5          | 22.18                 | 2.12                                | 24.3       | 269.15    | 1         |

**CHANNEL BANDWIDTH: 20MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 132072  | 1720            | 23.46                 | 2.12                                | 25.58      | 361.41    | 1         |
| 132322  | 1745            | 23.15                 | 2.12                                | 25.27      | 336.51    | 1         |
| 132572  | 1770            | 22.9                  | 2.12                                | 25.02      | 317.69    | 1         |

**CHANNEL BANDWIDTH: 20MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 132072  | 1720            | 22.7                  | 2.12                                | 24.82      | 303.39    | 1         |
| 132322  | 1745            | 22.48                 | 2.12                                | 24.6       | 288.4     | 1         |
| 132572  | 1770            | 22.21                 | 2.12                                | 24.33      | 271.02    | 1         |

### 3.2 FREQUENCY STABILITY MEASUREMENT

#### 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

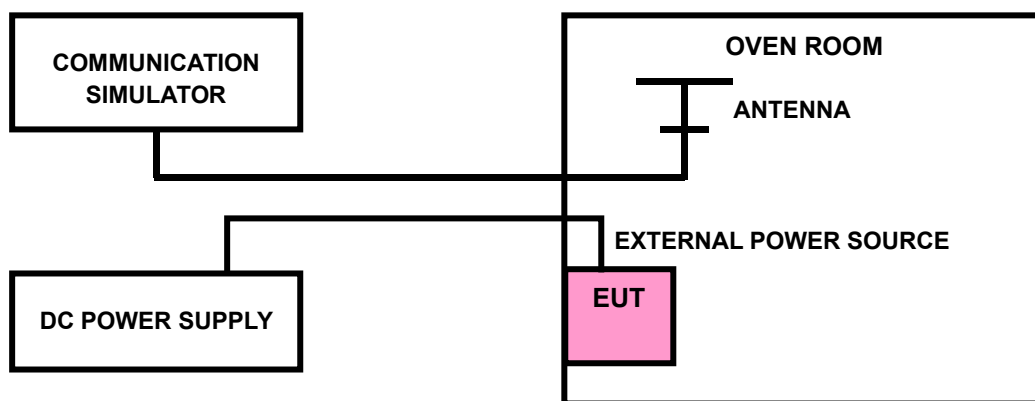
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

#### 3.2.2 TEST PROCEDURE

- a. 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.
- b. 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.
- c. 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.

#### 3.2.3 TEST SETUP







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### 3.2.4 TEST RESULTS

Refers to the data of W7L-P23070009RF04 (FCC ID: 2AJYU-8XS0001, model: SIM7672G) .

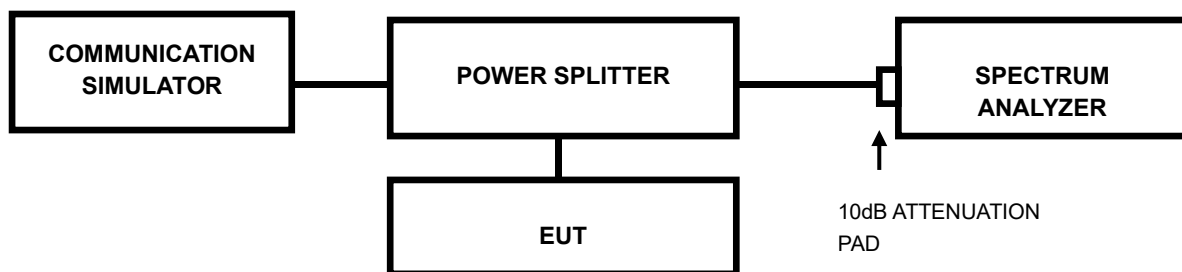
Note: VL = Low voltage(3.2V); VN/NV = Normal voltage(3.8V); VH = High voltage(4.2V);  
NT = Normal temperature (25°C)

### 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.



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### 3.3.4 TEST RESULTS

Refers to the data of W7L-P23070009RF04 (FCC ID: 2AJYU-8XS0001, model: SIM7672G) .



### 3.4 BAND EDGE MEASUREMENT

#### 3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC Part 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 Part 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.

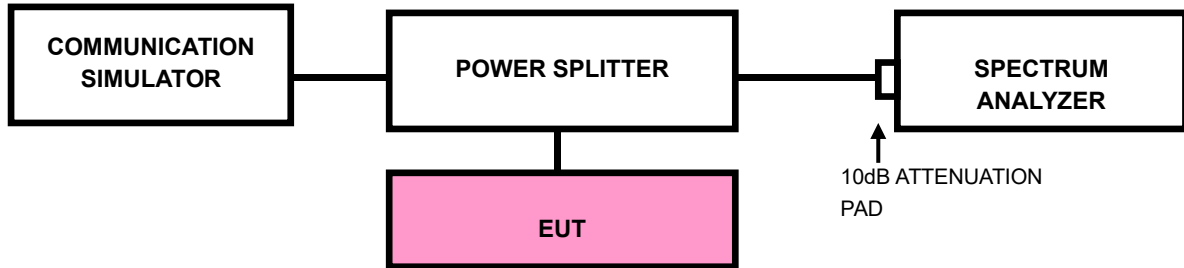
According to FCC Part 27.53 (n)(2)For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph is based on the use of measurement instrumentation employing a lresolution bandwidth of 1 megahertz or greater. 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, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.



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Test Report No.: W7L-P23070009-2RF04

### 3.4.2 TEST SETUP





### 3.4.3 TEST PROCEDURES

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



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### 3.4.4 TEST RESULTS

Refers to the data of W7L-P23070009RF04 (FCC ID: 2AJYU-8XS0001, model: SIM7672G) .

### 3.5 CONDUCTED SPURIOUS EMISSIONS

#### 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

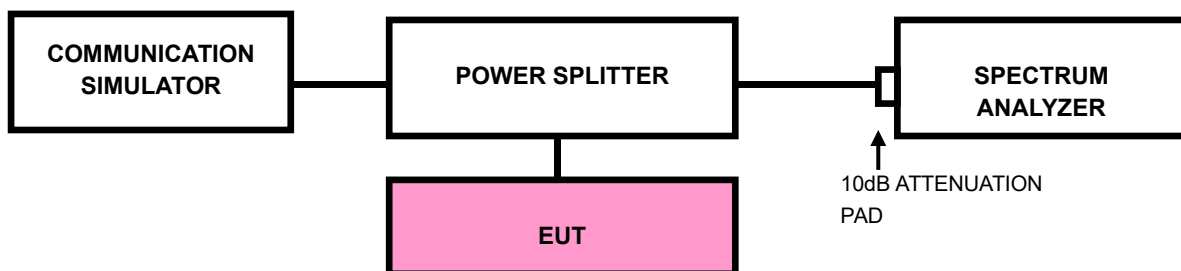
For: LTE Band7/Band41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log_{10}(P)$  dB. The limit of emission is equal to  $-25\text{dBm}$ .

#### 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







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### 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.

Refers to the data of W7L-P23070009RF04 (FCC ID: 2AJYU-8XS0001, model: SIM7672G) .



### 3.6 RADIATED EMISSION MEASUREMENT

#### 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

For: LTE Band38/ Band41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log_{10}(P)$  dB. The limit of emission is equal to  $-25\text{dBm}$ .

#### 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.  $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ .
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$ .

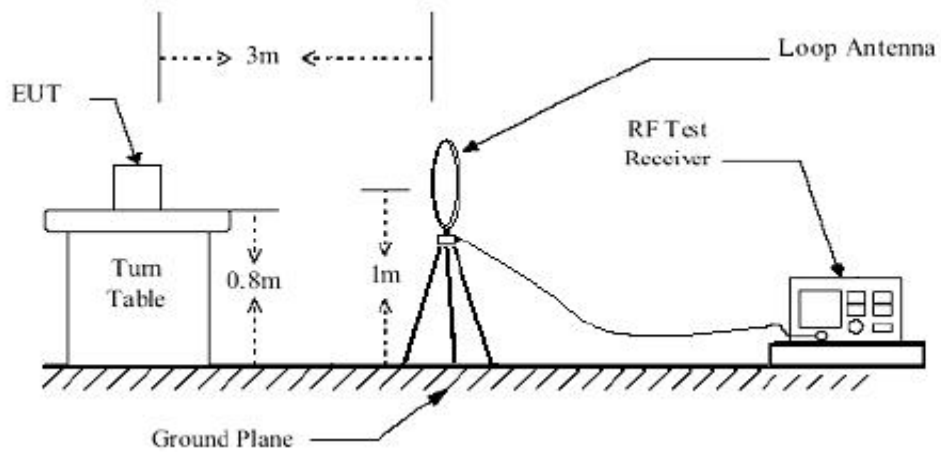
**NOTE:** The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

#### 3.6.3 DEVIATION FROM TEST STANDARD

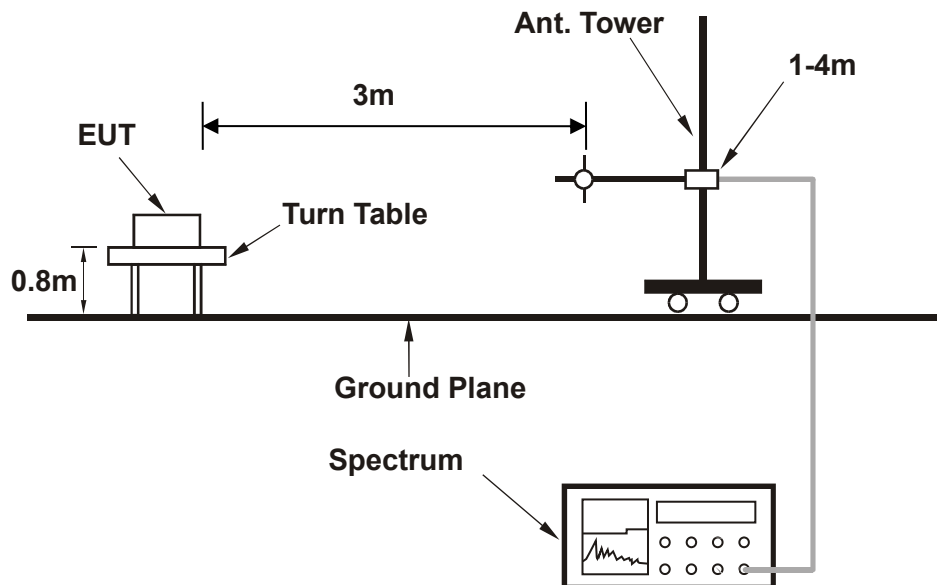
No deviation

### 3.6.4 TEST SETUP

#### < Frequency Range below 30MHz >



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

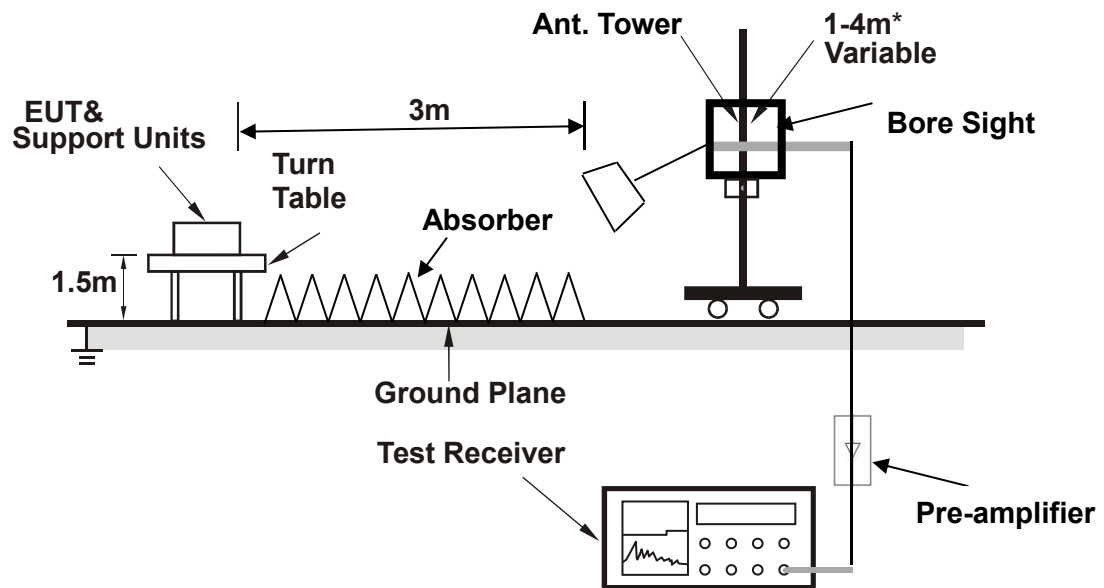




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Test Report No.: W7L-P23070009-2RF04

<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

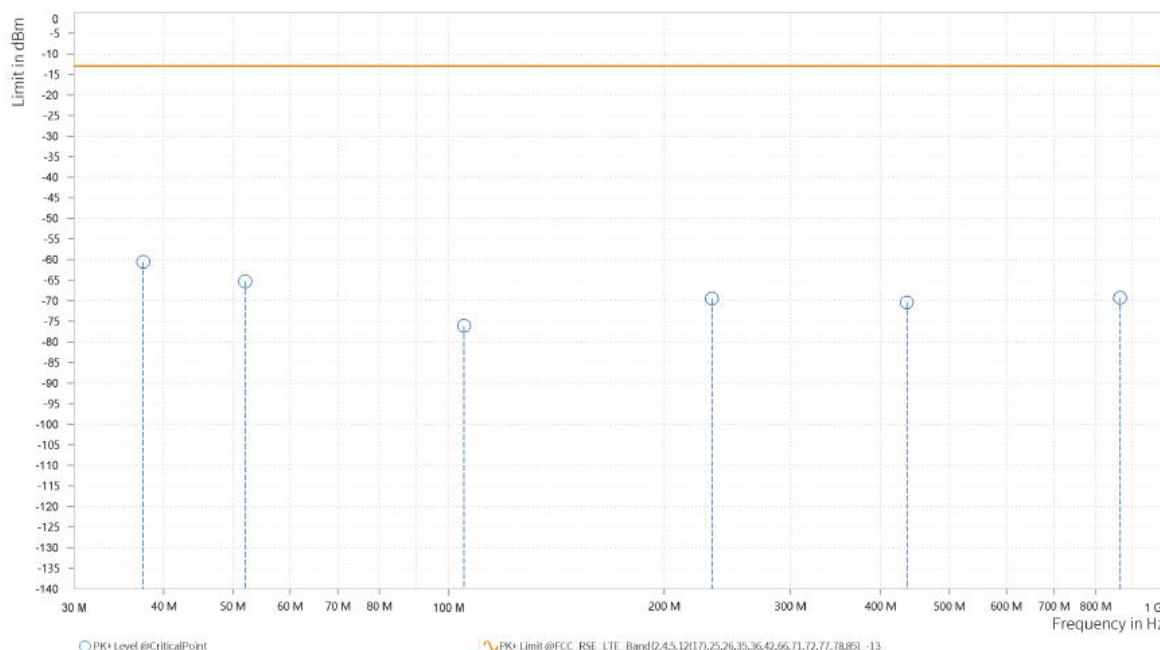
30 MHz – 1GHz data:

LTE Band 66

CHANNEL BANDWIDTH: 10MHz / QPSK

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Below 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Chao Wu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                        |               |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 1  | 37.450          | -60.56          | -13.00          | 47.56           | 6.74            | H            | 308.9         | 1                  |
| 1  | 52.000          | -65.27          | -13.00          | 52.27           | 3.70            | H            | 0.9           | 2                  |
| 1  | 105.000         | -76.11          | -13.00          | 63.11           | -4.23           | H            | 173           | 2                  |
| 1  | 233.100         | -69.44          | -13.00          | 56.44           | 8.18            | H            | 339.4         | 1                  |
| 1  | 435.900         | -70.36          | -13.00          | 57.36           | 7.23            | H            | 5             | 2                  |
| 2  | 865.250         | -69.29          | -13.00          | 56.29           | 11.49           | H            | 137.9         | 1                  |

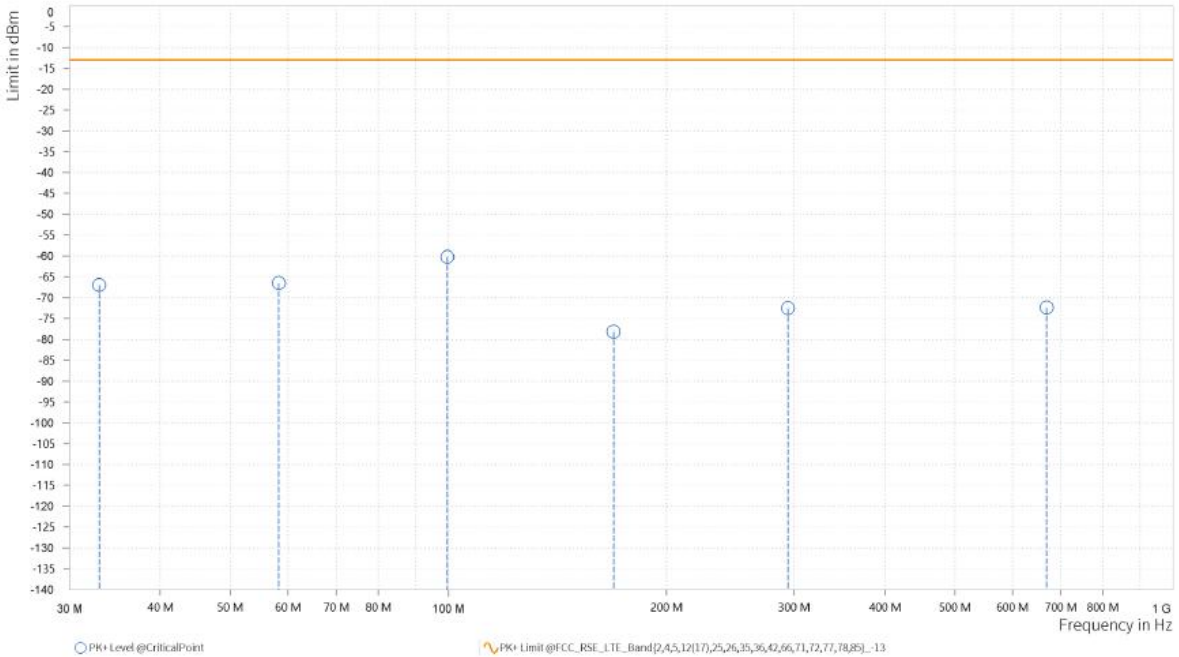




Test Report No.: W7L-P23070009-2RF04

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Below 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Chao Wu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 1  | 32.950          | -66.95          | -13.00          | 53.95           | 0.10            | V            | 4.3           | 1                  |
| 1  | 58.300          | -66.52          | -13.00          | 53.52           | 3.11            | V            | 317.3         | 1                  |
| 1  | 99.650          | -60.19          | -13.00          | 47.19           | 11.58           | V            | 346.6         | 1                  |
| 1  | 168.950         | -78.16          | -13.00          | 65.16           | -3.36           | V            | 359           | 2                  |
| 1  | 293.950         | -72.52          | -13.00          | 59.52           | 4.79            | V            | 1             | 2                  |
| 2  | 668.579         | -72.37          | -13.00          | 59.37           | 5.35            | V            | 293.4         | 1                  |





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VERITAS

Test Report No.: W7L-P23070009-2RF04

**ABOVE 1GHz**

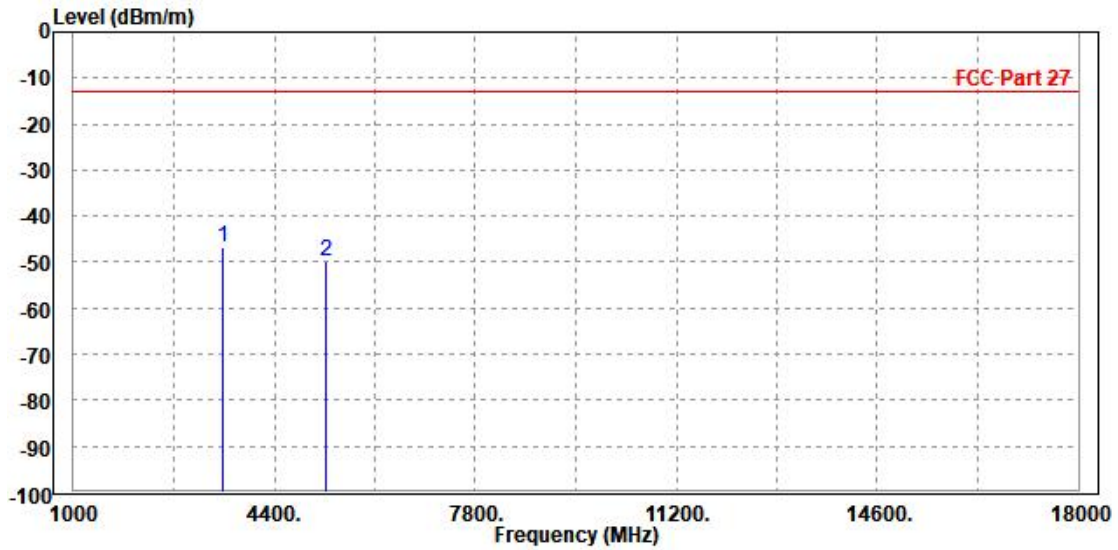
**Note:** For higher frequency, the emission is too low to be detected.

**LTE B66**

**CHANNEL BANDWIDTH: 1.4MHz / QPSK**

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                        |               |

|   | Freq        | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|-------------|--------|------------|------------|------------|--------|--------|------------|
|   | MHz         | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP 3516.000 | -46.67 | -54.03     | -13.00     | -33.67     | 7.36   | Peak   | Horizontal |
| 2 | 5265.000    | -49.81 | -59.92     | -13.00     | -36.81     | 10.11  | Peak   | Horizontal |

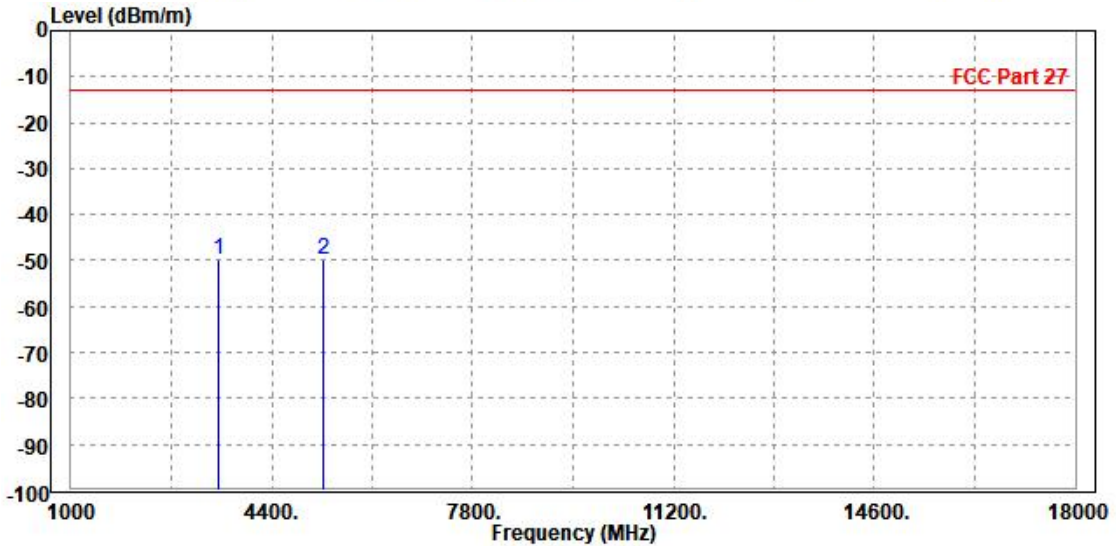




Test Report No.: W7L-P23070009-2RF04

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1    | 3510.000 | -49.81 | -57.14     | -13.00     | -36.81     | 7.33   | Peak   | Vertical  |
| 2 PP | 5267.000 | -49.64 | -60.15     | -13.00     | -36.64     | 10.51  | Peak   | Vertical  |





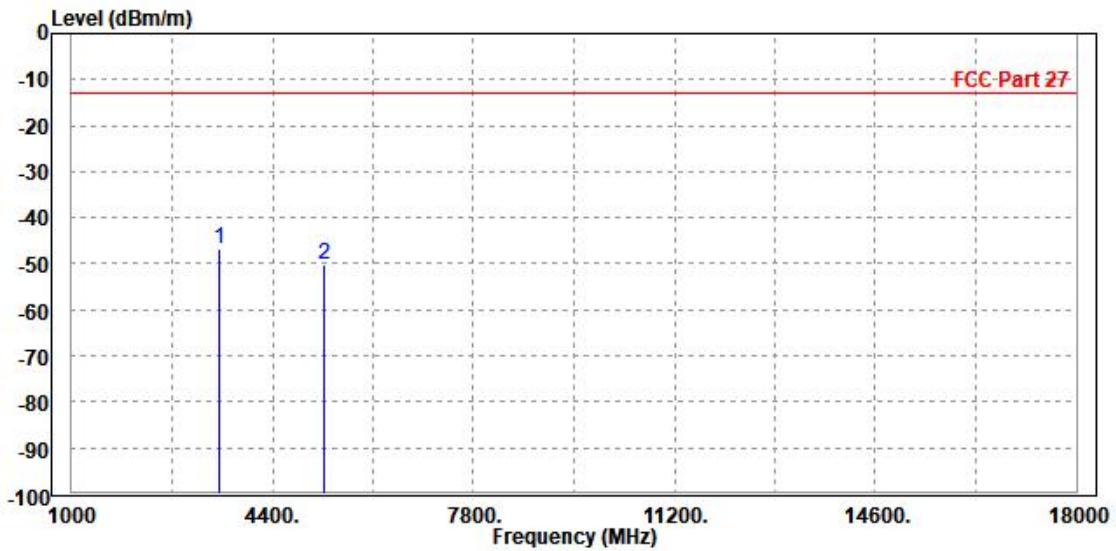


Test Report No.: W7L-P23070009-2RF04

**CHANNEL BANDWIDTH: 3MHz / QPSK**

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                        |               |

|   | Freq        | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|-------------|--------|------------|------------|------------|--------|--------|------------|
|   | MHz         | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP 3510.000 | -46.91 | -54.26     | -13.00     | -33.91     | 7.35   | Peak   | Horizontal |
| 2 | 5267.000    | -50.05 | -60.16     | -13.00     | -37.05     | 10.11  | Peak   | Horizontal |

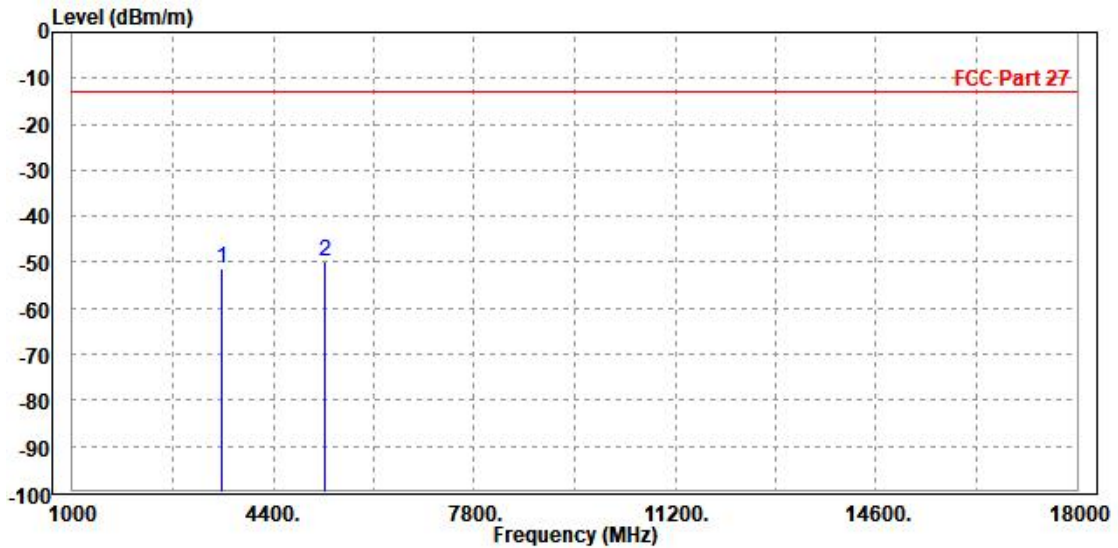




Test Report No.: W7L-P23070009-2RF04

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1    | 3516.000 | -51.46 | -58.80     | -13.00     | -38.46     | 7.34   | Peak   | Vertical  |
| 2 PP | 5265.000 | -49.75 | -60.26     | -13.00     | -36.75     | 10.51  | Peak   | Vertical  |



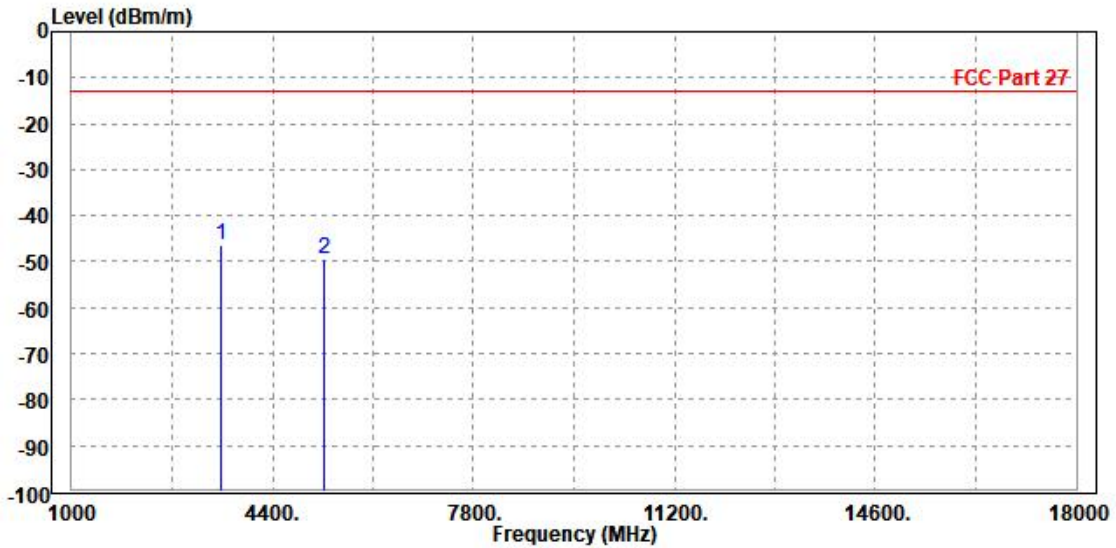


Test Report No.: W7L-P23070009-2RF04

**CHANNEL BANDWIDTH: 5MHz / QPSK**

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                        |               |

|   | Freq        | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|-------------|--------|------------|------------|------------|--------|--------|------------|
|   | MHz         | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP 3516.000 | -46.58 | -53.94     | -13.00     | -33.58     | 7.36   | Peak   | Horizontal |
| 2 | 5265.000    | -49.44 | -59.55     | -13.00     | -36.44     | 10.11  | Peak   | Horizontal |

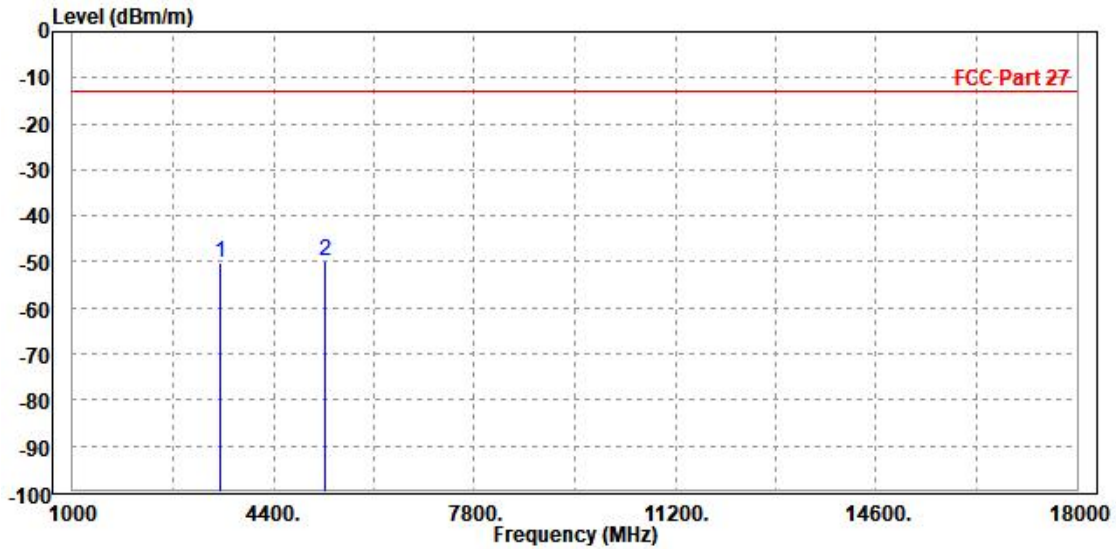




Test Report No.: W7L-P23070009-2RF04

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1    | 3510.000 | -50.37 | -57.70     | -13.00     | -37.37     | 7.33   | Peak   | Vertical  |
| 2 PP | 5267.000 | -49.90 | -60.41     | -13.00     | -36.90     | 10.51  | Peak   | Vertical  |





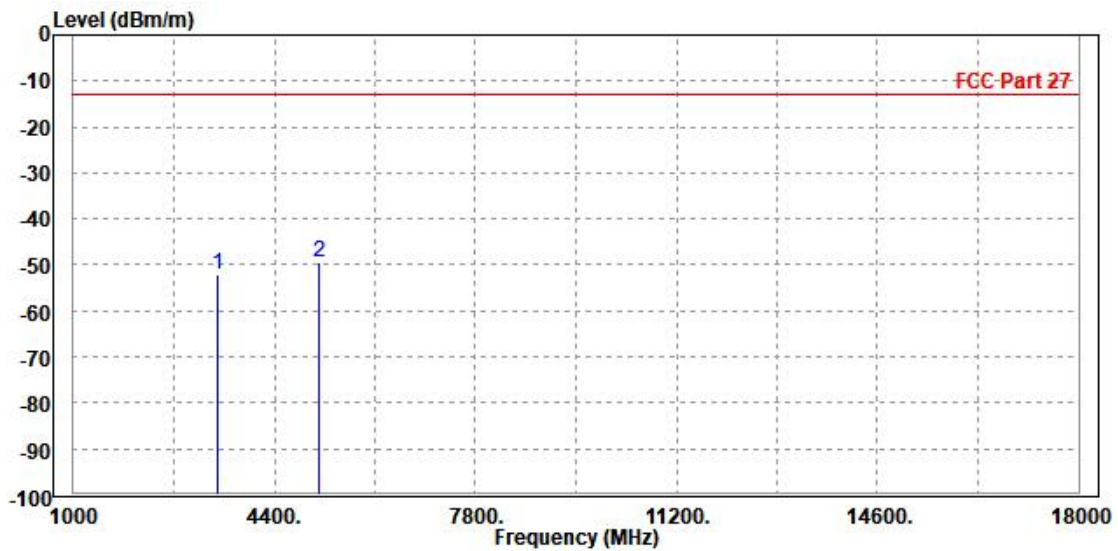
Test Report No.: W7L-P23070009-2RF04

CHANNEL BANDWIDTH: 10MHz / QPSK

CH132022

|  |                   |                 |               |
|--|-------------------|-----------------|---------------|
| MODE   | TX channel 132022 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                                       | 23deg. C, 70%RH   | INPUT POWER     | AC 120V/60HZ  |
| TESTED BY  | Jace Hu           |                 |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3430.000 | -52.26 | -59.49     | -13.00     | -39.26     | 7.23   | Peak   | Horizontal |
| 2 PP | 5148.000 | -49.36 | -59.28     | -13.00     | -36.36     | 9.92   | Peak   | Horizontal |

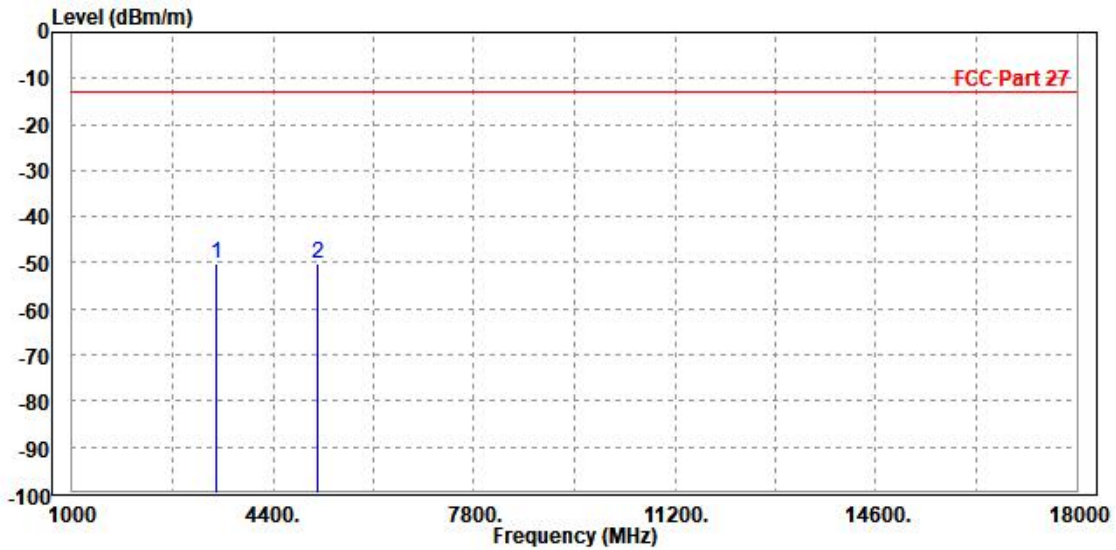




Test Report No.: W7L-P23070009-2RF04

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132022 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

|               | Read   | Limit  | Over   |        |        |               |
|---------------|--------|--------|--------|--------|--------|---------------|
| Freq          | Level  | Level  | Line   | Limit  | Factor | Remark        |
| MHz           | dBm/m  | dBm    | dBm/m  | dB     | dB/m   | Pol/Phase     |
| 1 PP 3431.000 | -50.17 | -57.38 | -13.00 | -37.17 | 7.21   | Peak Vertical |
| 2 5145.000    | -50.24 | -60.64 | -13.00 | -37.24 | 10.40  | Peak Vertical |





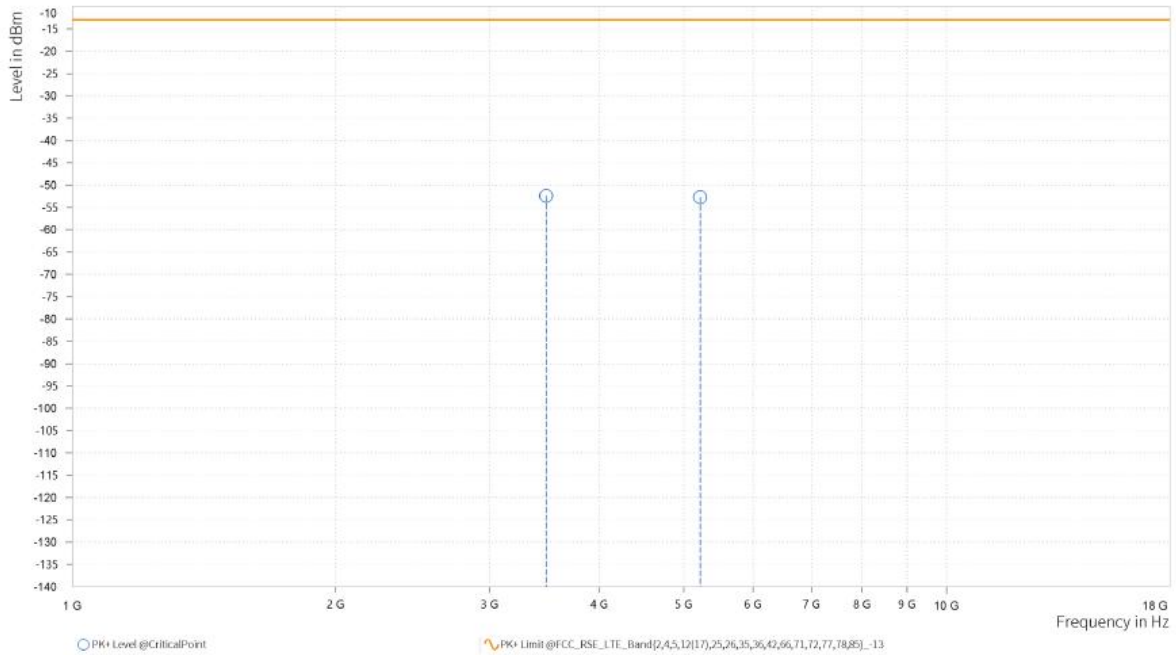
**BUREAU  
VERITAS**

**Test Report No.: W7L-P23070009-2RF04**

**CH132322**

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Chao Wu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                        |               |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,481.000       | -52.41          | -13.00          | 39.41           | 21.72           | H            | 1.8           | 2                  |
| 4  | 5,221.500       | -52.67          | -13.00          | 39.67           | 25.57           | H            | 358.6         | 1                  |

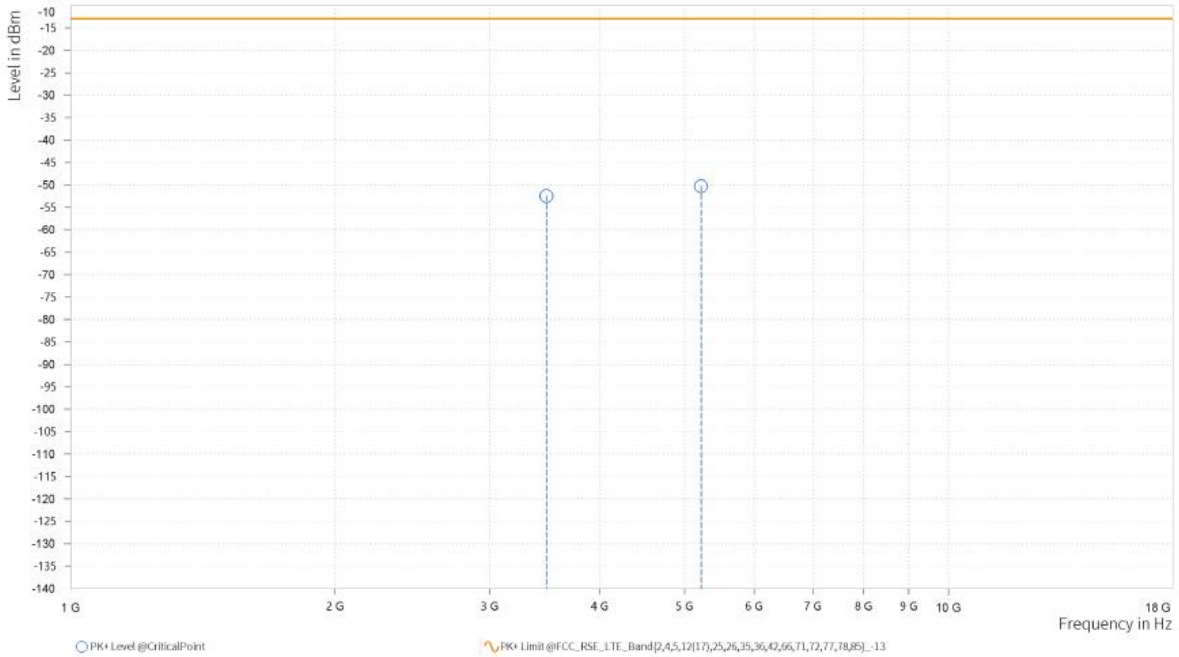




Test Report No.: W7L-P23070009-2RF04

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Chao Wu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,481.000       | -52.48          | -13.00          | 39.48           | 22.47           | V            | 141.9         | 2                  |
| 4  | 5,221.500       | -50.28          | -13.00          | 37.28           | 26.13           | V            | 359           | 2                  |







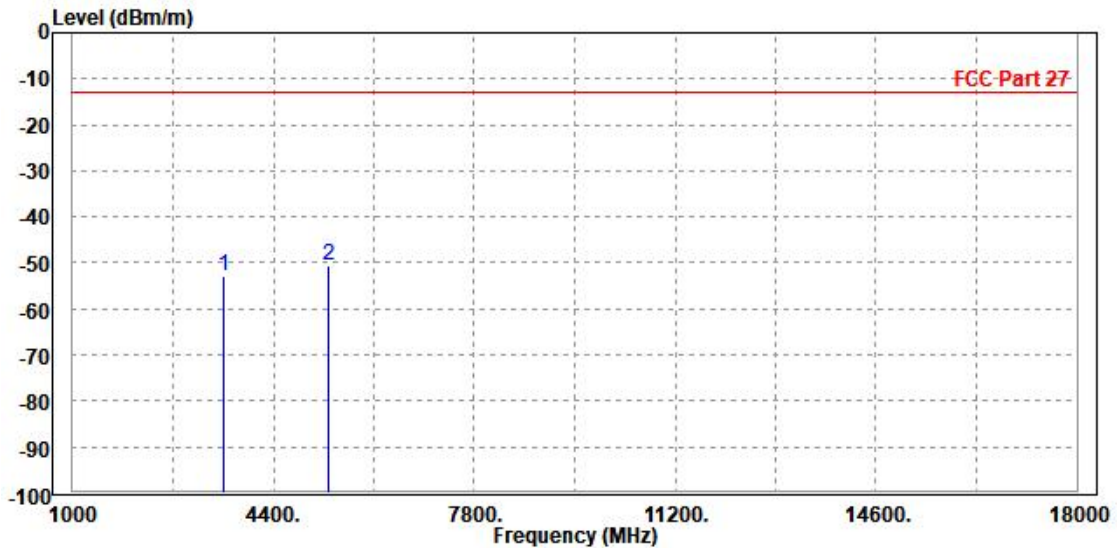
BUREAU  
VERITAS

Test Report No.: W7L-P23070009-2RF04

CH132622

|  |                   |                 |               |
|--|-------------------|-----------------|---------------|
| MODE   | TX channel 132622 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                                       | 23deg. C, 70%RH   | INPUT POWER     | AC 120V/60HZ  |
| TESTED BY  | Jace Hu           |                 |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                 |               |

|   | Freq        | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|-------------|--------|------------|------------|------------|--------|--------|------------|
|   | MHz         | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | 3550.000    | -52.78 | -60.23     | -13.00     | -39.78     | 7.45   | Peak   | Horizontal |
| 2 | PP 5325.000 | -50.61 | -60.81     | -13.00     | -37.61     | 10.20  | Peak   | Horizontal |

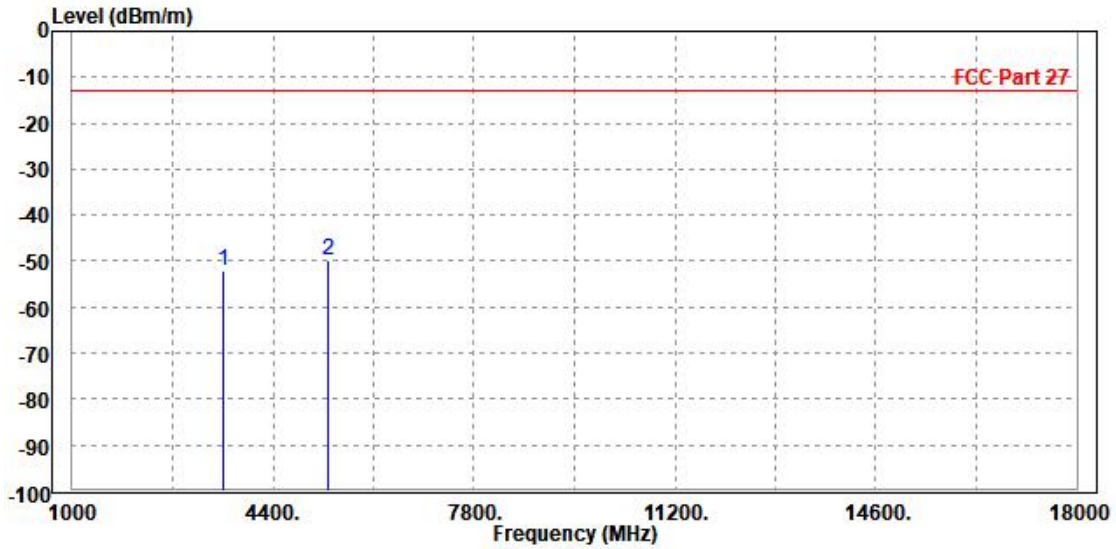




Test Report No.: W7L-P23070009-2RF04

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132622 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1    | 3550.000 | -52.18 | -59.57     | -13.00     | -39.18     | 7.39   | Peak   | Vertical  |
| 2 PP | 5318.000 | -49.67 | -60.23     | -13.00     | -36.67     | 10.56  | Peak   | Vertical  |



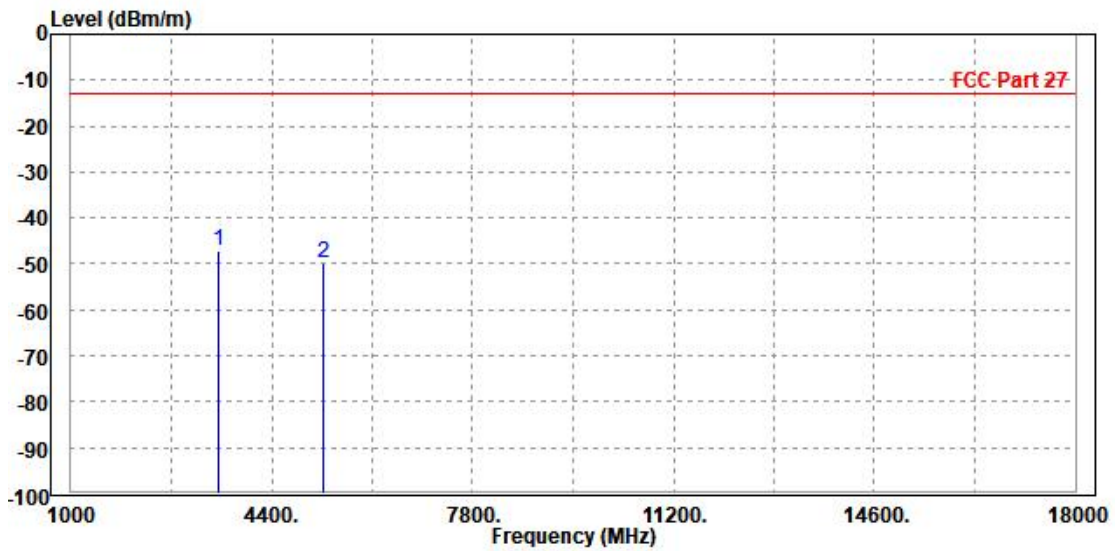


Test Report No.: W7L-P23070009-2RF04

**CHANNEL BANDWIDTH: 15MHz / QPSK**

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 PP | 3510.000 | -47.32 | -54.67     | -13.00     | -34.32     | 7.35   | Peak   | Horizontal |
| 2    | 5267.000 | -49.97 | -60.08     | -13.00     | -36.97     | 10.11  | Peak   | Horizontal |

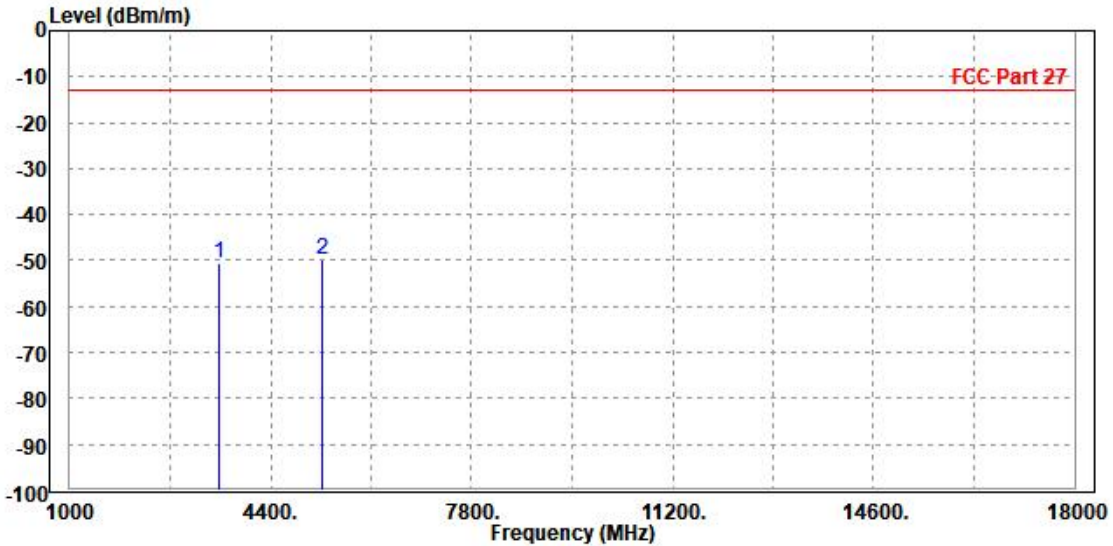




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|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

|   | Freq        | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|---|-------------|--------|------------|------------|------------|--------|--------|-----------|
|   | MHz         | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 | 3516.000    | -50.76 | -58.10     | -13.00     | -37.76     | 7.34   | Peak   | Vertical  |
| 2 | PP 5265.000 | -49.80 | -60.31     | -13.00     | -36.80     | 10.51  | Peak   | Vertical  |



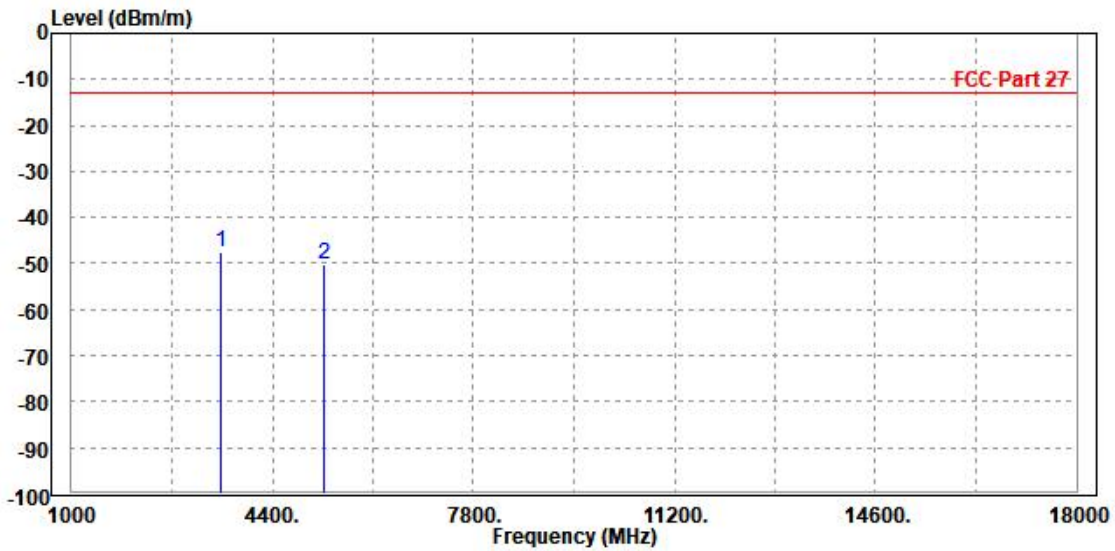


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**CHANNEL BANDWIDTH: 20MHz / QPSK**

|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                   |                        |               |

|   | Freq        | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|-------------|--------|------------|------------|------------|--------|--------|------------|
|   | MHz         | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP 3516.000 | -47.50 | -54.86     | -13.00     | -34.50     | 7.36   | Peak   | Horizontal |
| 2 | 5265.000    | -50.04 | -60.15     | -13.00     | -37.04     | 10.11  | Peak   | Horizontal |

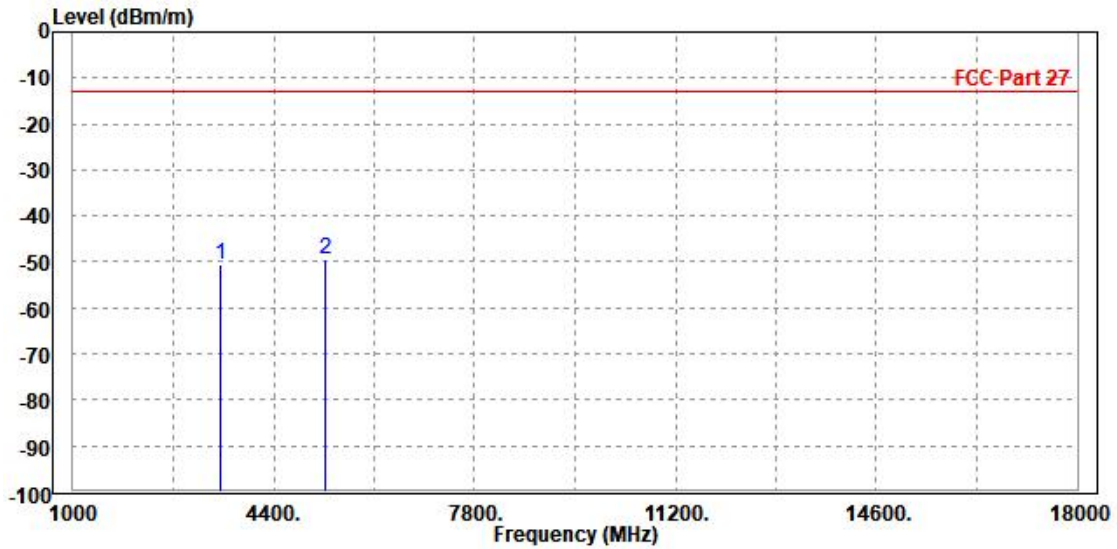




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|  |                   |                        |               |
|--|-------------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 132322 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH   | <b>INPUT POWER</b>     | AC 120V/60HZ  |
| <b>TESTED BY</b>   | Jace Hu           |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                   |                        |               |

|      | Freq     | Level  | Read Level | Limit  | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|--------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m  | dB         | dB/m   |        |           |
| 1    | 3510.000 | -50.72 | -58.05     | -13.00 | -37.72     | 7.33   | Peak   | Vertical  |
| 2 PP | 5267.000 | -49.33 | -59.84     | -13.00 | -36.33     | 10.51  | Peak   | Vertical  |

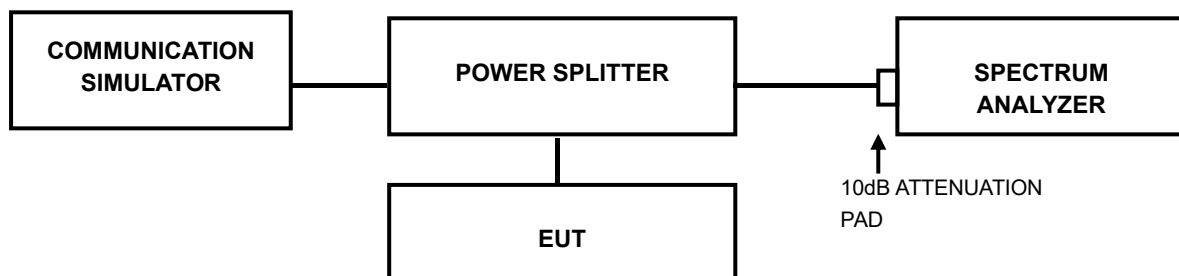


### 3.7 PEAK TO AVERAGE RATIO

#### 3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

#### 3.7.2 TEST SETUP



#### 3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.



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### 3.7.4 TEST RESULTS

Refers to the data of W7L-P23070009RF04 (FCC ID: 2AJYU-8XS0001, model: SIM7672G) .





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## 4 INFORMATION ON THE TESTING LABORATORIES

We, Huarui 7layers High Technology (Suzhou) Co., Ltd. ,were founded in 2020 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Suzhou EMC/RF Lab:**

Tel: +86 (0557) 368 1008



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## **5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No any modifications are made to the EUT by the lab during the test.

**--END--**