

# FCC TEST REPORT

## (PART 27)

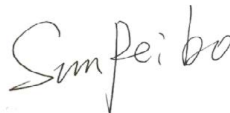
|            |                                                    |
|------------|----------------------------------------------------|
| Applicant: | Telit Communications S.p.A                         |
| Address:   | Via Stazione di Prosecco, 5/B Sgonico, 34010 Italy |

|                           |                                                                                                      |
|---------------------------|------------------------------------------------------------------------------------------------------|
| Manufacturer or Supplier: | Telit Communications S.p.A                                                                           |
| Address:                  | Via Stazione di Prosecco, 5/B Sgonico, 34010 Italy                                                   |
| Product:                  | LTE Cat 1 bis module                                                                                 |
| Brand Name:               | Telit Cinterion or  |
| Model Name:               | LE310P1-SN                                                                                           |
| FCC ID                    | RI7LE310P1SN                                                                                         |
| Date of tests             | Apr. 16, 2025~ Jun. 27, 2025                                                                         |

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

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

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

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Prepared by Hanwen Xu<br>Engineer / Mobile Department                               | Approved by Peibo Sun<br>Manager / Mobile Department                                 |
|  |  |
| Date: Jun. 27, 2025                                                                 | Date: Jun. 27, 2025                                                                  |

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## TABLE OF CONTENTS

|                                                                                   |           |
|-----------------------------------------------------------------------------------|-----------|
| <b>RELEASE CONTROL RECORD .....</b>                                               | <b>3</b>  |
| <b>1 SUMMARY OF TEST RESULTS .....</b>                                            | <b>4</b>  |
| 1.1 MEASUREMENT UNCERTAINTY .....                                                 | 5         |
| 1.2 TEST SITE AND INSTRUMENTS .....                                               | 6         |
| <b>2 GENERAL INFORMATION .....</b>                                                | <b>8</b>  |
| 2.1 GENERAL DESCRIPTION OF EUT .....                                              | 8         |
| 2.2 CONFIGURATION OF SYSTEM UNDER TEST .....                                      | 10        |
| 2.3 DESCRIPTION OF SUPPORT UNITS .....                                            | 11        |
| 2.4 TEST ITEM AND TEST CONFIGURATION .....                                        | 12        |
| 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS .....                                | 15        |
| <b>3 TEST TYPES AND RESULTS .....</b>                                             | <b>16</b> |
| 3.1 OUTPUT POWER MEASUREMENT .....                                                | 16        |
| 3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT .....                                    | 16        |
| 3.1.2 TEST PROCEDURES .....                                                       | 16        |
| 3.1.3 TEST SETUP .....                                                            | 17        |
| 3.1.4 TEST RESULTS .....                                                          | 18        |
| 3.2 FREQUENCY STABILITY MEASUREMENT .....                                         | 28        |
| 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT .....                             | 28        |
| 3.2.2 TEST PROCEDURE .....                                                        | 28        |
| 3.2.3 TEST SETUP .....                                                            | 28        |
| 3.2.4 TEST RESULTS .....                                                          | 28        |
| 3.3 OCCUPIED BANDWIDTH MEASUREMENT .....                                          | 29        |
| 3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT .....                              | 29        |
| 3.3.2 TEST SETUP .....                                                            | 29        |
| 3.3.3 TEST PROCEDURES .....                                                       | 29        |
| 3.3.4 TEST RESULTS .....                                                          | 29        |
| 3.4 BAND EDGE MEASUREMENT .....                                                   | 30        |
| 3.4.1 LIMITS OF BAND EDGE MEASUREMENT .....                                       | 30        |
| 3.4.2 TEST SETUP .....                                                            | 30        |
| 3.4.3 TEST PROCEDURES .....                                                       | 31        |
| 3.4.4 TEST RESULTS .....                                                          | 31        |
| 3.5 CONDUCTED SPURIOUS EMISSIONS .....                                            | 32        |
| 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT .....                    | 32        |
| 3.5.2 TEST PROCEDURE .....                                                        | 32        |
| 3.5.3 TEST SETUP .....                                                            | 32        |
| 3.5.4 TEST RESULTS .....                                                          | 33        |
| 3.6 RADIATED EMISSION MEASUREMENT .....                                           | 34        |
| 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT .....                               | 34        |
| 3.6.2 TEST PROCEDURES .....                                                       | 34        |
| 3.6.3 DEVIATION FROM TEST STANDARD .....                                          | 34        |
| 3.6.4 TEST SETUP .....                                                            | 35        |
| 3.6.5 TEST RESULTS .....                                                          | 37        |
| 3.7 PEAK TO AVERAGE RATIO .....                                                   | 55        |
| 3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT .....                           | 55        |
| 3.7.2 TEST SETUP .....                                                            | 55        |
| 3.7.3 TEST PROCEDURES .....                                                       | 55        |
| 3.7.4 TEST RESULTS .....                                                          | 55        |
| <b>4 INFORMATION ON THE TESTING LABORATORIES .....</b>                            | <b>56</b> |
| <b>5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB 57</b> |           |
| <b>6 APPENDIX .....</b>                                                           | <b>58</b> |



## RELEASE CONTROL RECORD

| ISSUE NO.             | REASON FOR CHANGE | DATE ISSUED   |
|-----------------------|-------------------|---------------|
| PBJ-NQN2504110217RF04 | Original release  | Jun. 27, 2025 |



# 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC PART 27 & PART 2                  |                                                               |            |           |
|---------------------------------------------------------|---------------------------------------------------------------|------------|-----------|
| STANDARD SECTION                                        | TEST TYPE AND LIMIT                                           | RESULT     | TEST LAB* |
| §2.1046                                                 | Conducted Output Power                                        | Compliance | A         |
| §27.50(d)(4)<br>§27.50(k)(3)<br>§27.50(h)(2)            | Equivalent Isotropically Radiated Power<br>(Band 4) (Band 66) | Compliance | A         |
| §2.1055<br>§27.54                                       | Frequency Stability                                           | Compliance | A         |
| §2.1049                                                 | Occupied Bandwidth                                            | Compliance | A         |
| §2.1051<br>§27.53(h)<br>§27.53(n)(2)<br>§27.53(m)(4)(6) | Conducted Band Edge Measurements<br>(Band 4) (Band 66)        | Compliance | A         |
| §2.1051<br>§27.53(h)<br>§27.53(n)(2)<br>§27.53(m)(4)(6) | Conducted Spurious Emissions<br>(Band 4) (Band 66)            | Compliance | A         |
| §2.1053<br>§27.53(h)<br>§27.53(n)(2)<br>§27.53(m)(4)(6) | Radiated Spurious Emissions<br>(Band 66)                      | Compliance | A         |
| §27.50(d)(5)<br>§27.50(k)(4)                            | Peak to average ratio                                         | Compliance | A         |

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

## \*Test Lab Information Reference

### Lab A:

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

### Lab Address:

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

**Accredited Test Lab Cert 6613.01**

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

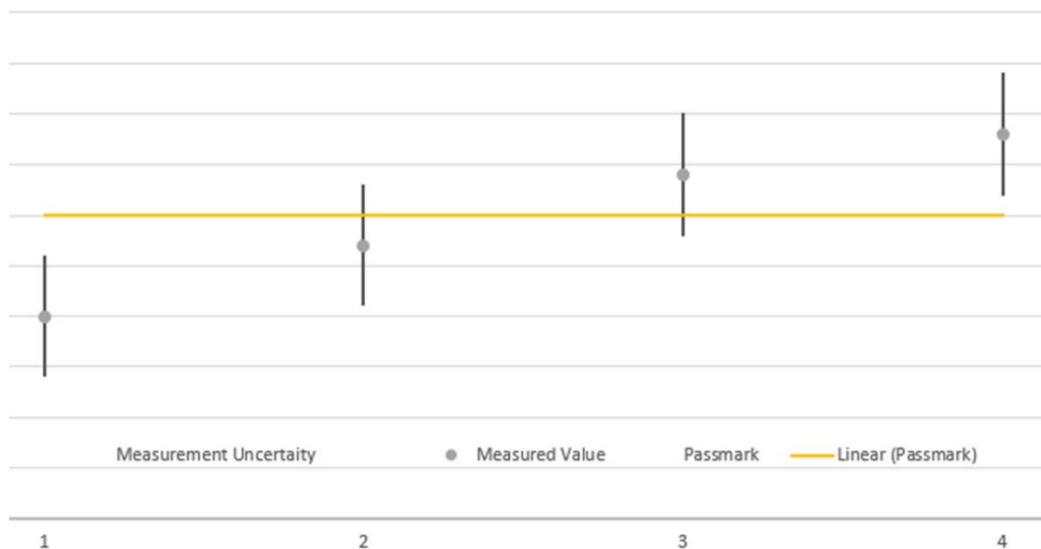


## 1.1 MEASUREMENT UNCERTAINTY

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

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

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



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

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

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



## 1.2 TEST SITE AND INSTRUMENTS

| Equipment                          | Manufacturer                 | Model No.   | Serial No.            | Last Cal. | Next Cal. |
|------------------------------------|------------------------------|-------------|-----------------------|-----------|-----------|
| Pre-Amplifier                      | R&S                          | SCU18F1     | 100815                | Aug.30,23 | Aug.29,25 |
| Pre-Amplifier                      | R&S                          | SCU08F1     | 101028                | Jan.22,24 | Jan.21,26 |
| Vector Signal Generator            | R&S                          | SMBV100B    | 102176                | Mar.29,24 | Mar.28,26 |
| Signal Generator                   | R&S                          | SMB100A     | 182185                | Mar.29,24 | Mar.28,26 |
| 3m Fully-anechoic Chamber          | TDK                          | 9m*6m*6m    | HRSW-SZ-EMC-01Chamber | Nov.25,22 | Nov.24,25 |
| 3m Semi-anechoic Chamber           | TDK                          | 9m*6m*6m    | HRSW-SZ-EMC-02Chamber | Nov.25,22 | Nov.24,25 |
| EMI TEST Receiver                  | R&S                          | ESR26       | 101734                | Mar.28,24 | Mar.27,26 |
| EMI TEST Receiver                  | R&S                          | ESW44       | 101973                | Mar.28,24 | Mar.27,26 |
| Bilog Antenna                      | SCHWARZBECK                  | VULB 9163   | 1264                  | Jul.04,25 | Jul.03,27 |
| Horn Antenna                       | ETS-LINDGREN                 | 3117        | 227836                | Aug.22,23 | Aug.21,25 |
| Horn Antenna (18GHz-40GHz)         | Steatite Q-par Antennas      | QMS 00880   | 23486                 | Jul.15,24 | Jul.14,26 |
| Horn Antenna                       | Steatite Q-par Antennas      | QMS 00208   | 23485                 | Mar.22,25 | Mar.21,27 |
| Loop Antenna                       | SCHWARZ                      | HFH2-Z2/Z2E | 100976                | Feb.22,25 | Feb.21,27 |
| WIDEBANDRADIO COMMUNICATION TESTER | R&S                          | CMW500      | 169399                | Jun.19,24 | Jun.18,26 |
| Radio Communication Tester         | Rohde&Schwarz                | CMX500      | 101446                | Mar.21,25 | Mar.20,27 |
| Test Software                      | EMC32                        | EMC32       | N/A                   | N/A       | N/A       |
| 6DB attenuator                     | Tonscend Technology Co., Ltd | N/A         | 23062787              | N/A       | N/A       |
| Test Software                      | ELEKTRA                      | ELEKTRA4.32 | N/A                   | N/A       | N/A       |
| Open Switch and Control Unit       | R&S                          | OSP220      | 101964                | N/A       | N/A       |
| DC Source                          | HYELEC                       | HY3010B     | 551016                | Aug.31,23 | Aug.30,25 |
| Hygrothermograph                   | DELI                         | 20210528    | SZ014                 | Mar.18,25 | Mar.17,27 |
| PC                                 | LENOVO                       | E14         | HRSW0024              | N/A       | N/A       |



|                      |        |                  |                |           |           |
|----------------------|--------|------------------|----------------|-----------|-----------|
| TMC-AMI18843A(CABLE) | R&S    | HF290-NMNM-7.00M | N/A            | N/A       | N/A       |
| TMC-AMI18843A(CABLE) | R&S    | HF290-NMNM-4.00M | N/A            | N/A       | N/A       |
| CABLE                | R&S    | W13.02           | N/A            | Apr.27,24 | Apr.26,25 |
| CABLE                | R&S    | W13.02           | N/A            | Apr.26,25 | Apr.25,26 |
| CABLE                | R&S    | W12.14           | N/A            | Apr.27,24 | Apr.26,25 |
| CABLE                | R&S    | W12.14           | N/A            | Apr.26,25 | Apr.25,26 |
| CABLE                | R&S    | J12J103539-00-1  | SEP-03-20-069  | Apr.27,24 | Apr.26,25 |
| CABLE                | R&S    | J12J103539-00-1  | SEP-03-20-069  | Apr.26,25 | Apr.25,26 |
| CABLE                | R&S    | J12J103539-00-1  | SEP-03-20-070  | Apr.27,24 | Apr.26,25 |
| CABLE                | R&S    | J12J103539-00-1  | SEP-03-20-070  | Apr.26,25 | Apr.25,26 |
| Temperature Chamber  | votsch | VT4002           | 58566078100050 | May.30,24 | May.29,26 |

**NOTE:**

1. The calibration interval of the above test instruments is 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.



## 2 GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

|                              |                                                                                                      |                        |
|------------------------------|------------------------------------------------------------------------------------------------------|------------------------|
| <b>PRODUCT*</b>              | LTE Cat 1 bis module                                                                                 |                        |
| <b>BRAND NAME*</b>           | Telit Cinterion or  |                        |
| <b>MODEL NAME*</b>           | LE310P1-SN                                                                                           |                        |
| <b>NOMINAL VOLTAGE*</b>      | 3.8V dc                                                                                              |                        |
| <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                                                              | 438.53 mW              |
|                              | LTE Band 4<br>Channel Bandwidth: 3MHz                                                                | 447.71 mW              |
|                              | LTE Band 4<br>Channel Bandwidth: 5MHz                                                                | 446.68 mW              |
|                              | LTE Band 4<br>Channel Bandwidth: 10MHz                                                               | 448.75 mW              |
|                              | LTE Band 4<br>Channel Bandwidth: 15MHz                                                               | 445.66 mW              |
|                              | LTE Band 4<br>Channel Bandwidth: 20MHz                                                               | 453.94 mW              |
|                              | LTE Band 66<br>Channel Bandwidth: 1.4MHz                                                             | 467.74 mW              |
|                              | LTE Band 66<br>Channel Bandwidth: 3MHz                                                               | 473.15 mW              |
|                              | LTE Band 66<br>Channel Bandwidth: 5MHz                                                               | 464.52 mW              |



|                      |                                                                 |                                 |
|----------------------|-----------------------------------------------------------------|---------------------------------|
|                      | LTE Band 66<br>Channel Bandwidth: 10MHz                         | 466.66 mW                       |
|                      | LTE Band 66<br>Channel Bandwidth: 15MHz                         | 474.24 mW                       |
|                      | LTE Band 66<br>Channel Bandwidth: 20MHz                         | 477.53 mW                       |
| EMISSION DESIGNATOR  | LTE Band 66<br>Channel Bandwidth: 1.4MHz                        | QPSK: 1M10G7D<br>16QAM: 1M10W7D |
|                      | LTE Band 66<br>Channel Bandwidth: 3MHz                          | QPSK: 2M69G7D<br>16QAM: 2M70W7D |
|                      | LTE Band 66<br>Channel Bandwidth: 5MHz                          | QPSK: 4M55G7D<br>16QAM: 4M55W7D |
|                      | LTE Band 66<br>Channel Bandwidth: 10MHz                         | QPSK: 9M03G7D<br>16QAM: 4M94W7D |
|                      | LTE Band 66<br>Channel Bandwidth: 15MHz                         | QPSK: 13M6G7D<br>16QAM: 4M95W7D |
|                      | LTE Band 66<br>Channel Bandwidth: 20MHz                         | QPSK: 18M0G7D<br>16QAM: 4M95W7D |
|                      |                                                                 |                                 |
|                      |                                                                 |                                 |
|                      |                                                                 |                                 |
|                      |                                                                 |                                 |
| ANTENNA TYPE*        | Fixed External Antenna Antenna with 3 dBi gain for LTE 4&LTE 66 |                                 |
| HW VERSION*          | 0.0                                                             |                                 |
| SW VERSION*          | M0E.200001                                                      |                                 |
| I/O PORTS*           | Refer to user's manual                                          |                                 |
| CABLE SUPPLIED*      | N/A                                                             |                                 |
| EXTREME TEMPERATURE* | -10°C ~ 55°C                                                    |                                 |
| EXTREME VOLTAGE*     | 3.4Vdc ~ 4.2Vdc                                                 |                                 |

**NOTE:**

- \*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.
- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

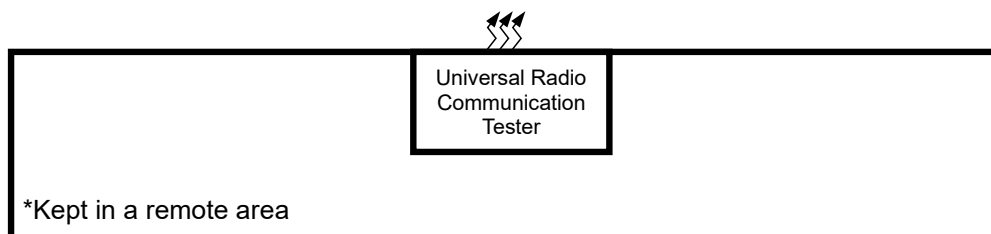
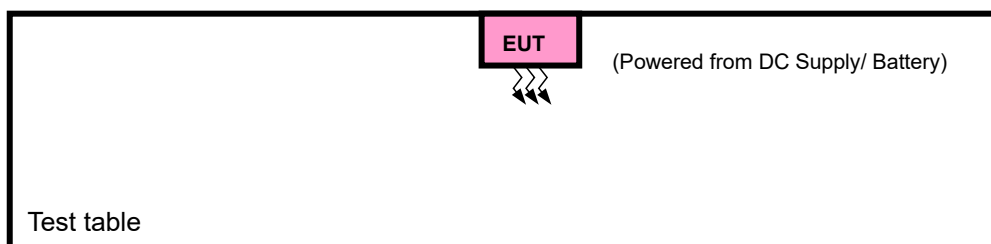
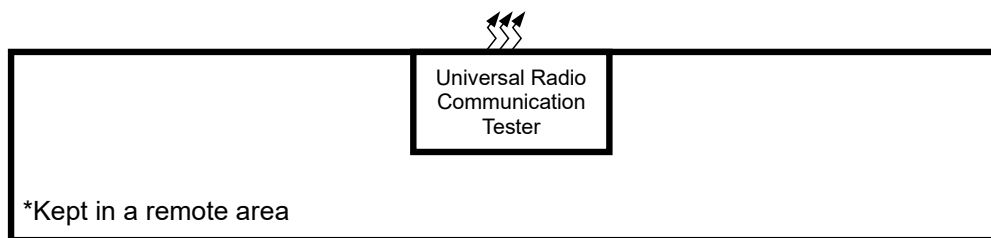
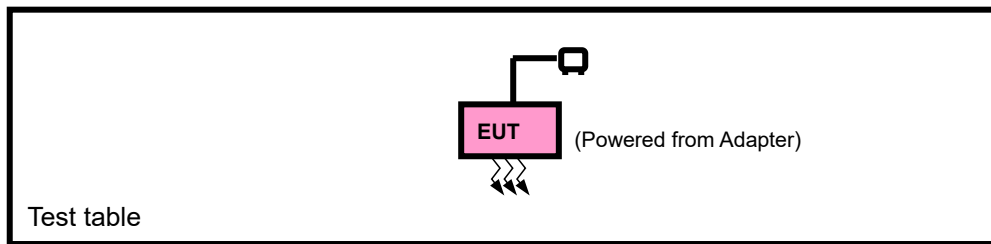
| MODULATION MODE | TX FUNCTION |
|-----------------|-------------|
| LTE 4/66        | 1TX/1RX     |

- 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    |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|-----------------------------------------------------|
| 1   | DC Line: Unshielded, 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

| 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>B</b> | FREQUENCY STABILITY | 132072 to 132572 | 132072,132322,132572 | 20MHz  | QPSK        | 100 RB / 0 RB Offset |
| <b>A</b> | OCCUPIED BANDWIDTH  | 131979 to 132665 | 131979,132322,132665 | 1.4MHz | QPSK, 16QAM | 6 RB / 0 RB Offset   |
|          |                     | 131987 to 132657 | 131987,132322,132657 | 3MHz   | QPSK, 16QAM | 15 RB / 0 RB Offset  |
|          |                     | 131997 to 132647 | 131997,132322,132647 | 5MHz   | QPSK, 16QAM | 25 RB / 0 RB Offset  |
|          |                     | 132022 to 132622 | 132022,132322,132622 | 10MHz  | QPSK, 16QAM | 50 RB / 0 RB Offset  |
|          |                     | 132047 to 132597 | 132047,132322,132597 | 15MHz  | QPSK, 16QAM | 75 RB / 0 RB Offset  |
|          |                     | 132072 to 132572 | 132072,132322,132572 | 20MHz  | QPSK, 16QAM | 100 RB / 0 RB Offset |
| <b>A</b> | BAND EDGE           | 131979 to 132322 | 131979               | 1.4MHz | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|          |                     |                  |                      |        |             | 6 RB / 0 RB Offset   |
|          |                     | 132322           | 132322               | 1.4MHz | QPSK, 16QAM | 1 RB / 5 RB Offset   |
|          |                     |                  |                      |        |             | 6 RB / 0 RB Offset   |
|          |                     | 131987 to 132657 | 131987               | 3MHz   | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|          |                     |                  |                      |        |             | 15 RB / 0 RB Offset  |
|          |                     | 132657           | 132657               | 3MHz   | QPSK, 16QAM | 1 RB / 14 RB Offset  |
|          |                     |                  |                      |        |             | 15 RB / 0 RB Offset  |
|          |                     | 131997 to 132647 | 131997               | 5MHz   | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|          |                     |                  |                      |        |             | 25 RB / 0 RB Offset  |
|          |                     | 132647           | 132647               | 5MHz   | QPSK, 16QAM | 1 RB / 24 RB Offset  |
|          |                     |                  |                      |        |             | 25 RB / 0 RB Offset  |
|          |                     | 132022 to 132622 | 132022               | 10MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|          |                     |                  |                      |        |             | 50 RB / 0 RB Offset  |
|          |                     | 132622           | 132622               | 10MHz  | QPSK, 16QAM | 1 RB / 49 RB Offset  |
|          |                     |                  |                      |        |             | 50 RB / 0 RB Offset  |
|          |                     | 132047 to 132597 | 132047               | 15MHz  | QPSK        | 1 RB / 0 RB Offset   |
|          |                     |                  |                      |        |             | 75 RB / 0 RB Offset  |
|          |                     | 132597           | 132597               | 15MHz  | QPSK        | 1 RB / 74 RB Offset  |
|          |                     |                  |                      |        |             | 75 RB / 0 RB Offset  |
|          |                     | 132072 to 132572 | 132072               | 20MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|          |                     |                  |                      |        |             | 100 RB / 0 RB Offset |
|          |                     | 132572           | 132572               | 20MHz  | QPSK, 16QAM | 1 RB / 99 RB Offset  |
|          |                     |                  |                      |        |             | 100 RB / 0 RB Offset |
| <b>A</b> | CONDCUETED EMISSION | 131979 to 132665 | 131979,132322,132665 | 1.4MHz | QPSK        | 1 RB / 0 RB Offset   |
|          |                     | 131987 to 132657 | 131987,132322,132657 | 3MHz   | QPSK        | 1 RB / 0 RB Offset   |



|   |                       |                  |                        |        |             |                                            |
|---|-----------------------|------------------|------------------------|--------|-------------|--------------------------------------------|
|   |                       | 131997 to 132647 | 131997, 132322, 132647 | 5MHz   | QPSK        | 1 RB / 0 RB Offset                         |
|   |                       | 132022 to 132622 | 132022, 132322, 132622 | 10MHz  | QPSK        | 1 RB / 0 RB Offset                         |
|   |                       | 132047 to 132597 | 132047, 132322, 132597 | 15MHz  | QPSK        | 1 RB / 0 RB Offset                         |
|   |                       | 132072 to 132572 | 132072, 132322, 132572 | 20MHz  | QPSK        | 1 RB / 0 RB Offset                         |
| A | PEAK TO AVERAGE RATIO | 131979 to 132665 | 131979, 132322, 132665 | 1.4MHz | QPSK, 16QAM | 1 RB / 0 RB Offset<br>6RB / 0 RB Offset    |
|   |                       | 131987 to 132657 | 131987, 132322, 132657 | 3MHz   | QPSK, 16QAM | 1 RB / 0 RB Offset<br>15 RB / 0 RB Offset  |
|   |                       | 131997 to 132647 | 131997, 132322, 132647 | 5MHz   | QPSK, 16QAM | 1 RB / 0 RB Offset<br>25 RB / 0 RB Offset  |
|   |                       | 132022 to 132622 | 132022, 132322, 132622 | 10MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset<br>50 RB / 0 RB Offset  |
|   |                       | 132047 to 132597 | 132047, 132322, 132597 | 15MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset<br>75 RB / 0 RB Offset  |
|   |                       | 132072 to 132572 | 132072, 132322, 132572 | 20MHz  | QPSK, 16QAM | 1 RB / 0 RB Offset<br>100 RB / 0 RB Offset |
| A | RADIATED EMISSION     | 131979 to 132665 | 131979, 132322, 132665 | 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 | 132322                 | 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.

| TEST CONDITION        |                          |                                |           |
|-----------------------|--------------------------|--------------------------------|-----------|
| TEST ITEM             | ENVIRONMENTAL CONDITIONS | INPUT POWER                    | TESTED BY |
| EIRP                  | 23deg. C, 70%RH          | DC 3.8V By Adapter             | Hanwen Xu |
| FREQUENCY STABILITY   | 23deg. C, 70%RH          | DC 3.4V/ 3.8V/ 4.2V By Adapter | Hanwen Xu |
| OCCUPIED BANDWIDTH    | 23deg. C, 70%RH          | DC 3.8V By Adapter             | Hanwen Xu |
| BAND EDGE             | 23deg. C, 70%RH          | DC 3.8V By Adapter             | Hanwen Xu |
| CONDUCTED EMISSION    | 23deg. C, 70%RH          | DC 3.8V By Adapter             | Hanwen Xu |
| RADIATED EMISSION     | 23deg. C, 70%RH          | AC 120V/60Hz                   | Hanwen Xu |
| PEAK TO AVERAGE RATIO | 23deg. C, 70%RH          | DC 3.8V By Adapter             | Hanwen Xu |



## **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.

According to the specific rule Part 27.50 (k)(3) Mobile devices are limited to 1Watt (30 dBm) EIRP, Mobile devices operating inl these bands must employ a means for limiting power to the minimum necessary for successful communications

##### 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 determing 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.

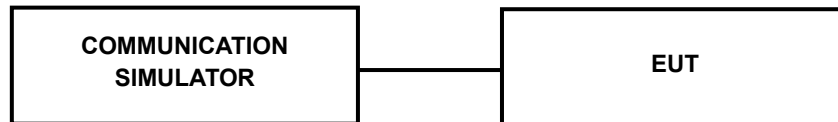
###### CONDUCTED POWER MEASUREMENT:

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



### 3.1.3 TEST SETUP

#### CONDUCTED POWER MEASUREMENT:



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



### 3.1.4 TEST RESULTS

#### CONDUCTED OUTPUT POWER (dBm)

| LTE Band 4 |            |         |           |                         |                         |                         |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|
| Band/BW    | Modulation | RB Size | RB Offset | Low<br>CH 19957         | Mid<br>CH 20175         | High<br>CH 20393        |
|            |            |         |           | Frequency<br>1710.7 MHz | Frequency<br>1732.5 MHz | Frequency<br>1754.3 MHz |
| 4/ 1.4     | QPSK       | 1       | 0         | 23.42                   | 23.02                   | 23.18                   |
|            |            | 1       | 2         | 23.20                   | 23.00                   | 22.96                   |
|            |            | 1       | 5         | 23.12                   | 22.94                   | 23.28                   |
|            |            | 3       | 0         | 23.38                   | 22.83                   | 22.76                   |
|            |            | 3       | 1         | 23.27                   | 22.91                   | 22.93                   |
|            |            | 3       | 3         | 23.23                   | 22.87                   | 23.10                   |
|            |            | 6       | 0         | 22.44                   | 21.78                   | 22.15                   |
|            | 16QAM      | 1       | 0         | 22.44                   | 21.89                   | 22.14                   |
|            |            | 1       | 2         | 22.07                   | 22.11                   | 21.84                   |
|            |            | 1       | 5         | 21.87                   | 22.05                   | 22.52                   |
|            |            | 3       | 0         | 22.51                   | 22.32                   | 22.32                   |
|            |            | 3       | 1         | 22.32                   | 22.27                   | 22.38                   |
|            |            | 3       | 3         | 22.28                   | 22.33                   | 22.47                   |
|            |            | 6       | 0         | 21.18                   | 21.07                   | 21.11                   |



| LTE Band 4 |            |         |           |                      |                      |                      |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|
| Band/BW    | Modulation | RB Size | RB Offset | Low CH 19965         | Mid CH 20175         | High CH 20385        |
|            |            |         |           | Frequency 1711.5 MHz | Frequency 1732.5 MHz | Frequency 1753.5 MHz |
| 4/ 3       | QPSK       | 1       | 0         | 23.51                | 23.02                | 23.18                |
|            |            | 1       | 7         | 23.26                | 23.07                | 22.93                |
|            |            | 1       | 14        | 23.13                | 22.91                | 23.27                |
|            |            | 8       | 0         | 22.50                | 21.98                | 21.97                |
|            |            | 8       | 3         | 22.39                | 22.10                | 22.12                |
|            |            | 8       | 7         | 22.36                | 22.06                | 22.26                |
|            |            | 15      | 0         | 22.39                | 21.82                | 22.15                |
|            | 16QAM      | 1       | 0         | 22.41                | 21.89                | 22.17                |
|            |            | 1       | 7         | 22.08                | 22.12                | 21.86                |
|            |            | 1       | 14        | 21.96                | 22.04                | 22.59                |
|            |            | 8       | 0         | 21.55                | 21.40                | 21.36                |
|            |            | 8       | 3         | 21.46                | 21.38                | 21.58                |
|            |            | 8       | 7         | 21.38                | 21.36                | 21.62                |
|            |            | 15      | 0         | 21.23                | 21.04                | 21.17                |
| Band/BW    | Modulation | RB Size | RB Offset | Low CH 19975         | Mid CH 20175         | High CH 20375        |
|            |            |         |           | Frequency 1712.5 MHz | Frequency 1732.5 MHz | Frequency 1752.5 MHz |
| 4/ 5       | QPSK       | 1       | 0         | 23.50                | 23.04                | 23.09                |
|            |            | 1       | 12        | 23.19                | 22.97                | 22.91                |
|            |            | 1       | 24        | 23.14                | 22.92                | 23.25                |
|            |            | 12      | 0         | 22.52                | 22.02                | 21.95                |
|            |            | 12      | 6         | 22.43                | 22.04                | 22.07                |
|            |            | 12      | 13        | 22.35                | 22.08                | 22.30                |
|            |            | 25      | 0         | 22.40                | 21.72                | 22.21                |
|            | 16QAM      | 1       | 0         | 22.45                | 21.84                | 22.17                |
|            |            | 1       | 12        | 22.12                | 22.14                | 21.88                |
|            |            | 1       | 24        | 21.92                | 22.08                | 22.65                |
|            |            | 12      | 0         | 21.62                | 21.46                | 21.48                |
|            |            | 12      | 6         | 21.52                | 21.32                | 21.45                |
|            |            | 12      | 13        | 21.39                | 21.44                | 21.60                |
|            |            | 25      | 0         | 21.17                | 21.09                | 21.09                |
| LTE Band 4 |            |         |           |                      |                      |                      |
| Band/BW    | Modulation | RB Size | RB Offset | Low CH 20000         | Mid CH 20175         | High CH 20350        |
|            |            |         |           | Frequency 1715 MHz   | Frequency 1732.5 MHz | Frequency 1750 MHz   |
| 4/ 10      | QPSK       | 1       | 0         | 23.52                | 23.09                | 23.05                |
|            |            | 1       | 24        | 23.28                | 23.07                | 22.90                |
|            |            | 1       | 49        | 23.06                | 22.93                | 23.27                |
|            |            | 25      | 0         | 22.55                | 22.00                | 22.04                |
|            |            | 25      | 12        | 22.46                | 22.07                | 22.06                |
|            |            | 25      | 25        | 22.33                | 22.07                | 22.22                |
|            |            | 50      | 0         | 22.45                | 21.82                | 22.12                |
|            | 16QAM      | 1       | 0         | 22.42                | 21.92                | 22.19                |



**BUREAU VERITAS** Test Report No.: PBJ-NQN2504110217RF04

|         |            | 1       | 12        | 22.16                | 22.05                | 21.84                |
|---------|------------|---------|-----------|----------------------|----------------------|----------------------|
|         |            | 1       | 24        | 21.88                | 22.03                | 22.61                |
|         |            | 12      | 0         | 22.13                | 21.78                | 21.76                |
|         |            | 12      | 18        | 21.83                | 21.80                | 21.98                |
|         |            | 12      | 37        | 21.76                | 21.85                | 22.11                |
|         |            | 27      | 0         | 21.20                | 21.17                | 21.05                |
| 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         | 23.49                | 23.00                | 23.14                |
|         |            | 1       | 37        | 23.21                | 23.02                | 22.96                |
|         |            | 1       | 74        | 23.16                | 22.92                | 23.18                |
|         |            | 36      | 0         | 22.63                | 22.02                | 21.98                |
|         |            | 36      | 19        | 22.40                | 22.14                | 22.16                |
|         |            | 36      | 39        | 22.32                | 22.05                | 22.19                |
|         |            | 75      | 0         | 22.50                | 21.69                | 22.11                |
|         | 16QAM      | 1       | 0         | 22.48                | 21.93                | 22.18                |
|         |            | 1       | 12        | 22.13                | 22.02                | 21.94                |
|         |            | 1       | 24        | 21.89                | 21.99                | 22.56                |
|         |            | 12      | 0         | 22.22                | 21.78                | 21.70                |
|         |            | 12      | 31        | 21.80                | 21.75                | 22.00                |
|         |            | 12      | 62        | 21.84                | 21.77                | 22.12                |
|         |            | 27      | 0         | 21.25                | 21.09                | 21.09                |

| LTE Band 4 |            |         |           |                    |                      |                    |
|------------|------------|---------|-----------|--------------------|----------------------|--------------------|
| 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         | 23.57              | 23.12                | 23.20              |
|            |            | 1       | 50        | 23.31              | 23.09                | 23.03              |
|            |            | 1       | 99        | 23.18              | 23.05                | 23.32              |
|            |            | 50      | 0         | 22.65              | 22.09                | 22.05              |
|            |            | 50      | 25        | 22.49              | 22.18                | 22.20              |
|            |            | 50      | 50        | 22.45              | 22.17                | 22.32              |
|            |            | 100     | 0         | 22.54              | 21.83                | 22.26              |
|            | 16QAM      | 1       | 0         | 22.55              | 21.99                | 22.21              |
|            |            | 1       | 50        | 22.17              | 22.15                | 21.98              |
|            |            | 1       | 99        | 21.97              | 22.13                | 22.66              |
|            |            | 12      | 0         | 22.25              | 21.88                | 21.85              |
|            |            | 12      | 43        | 21.90              | 21.81                | 22.09              |
|            |            | 12      | 87        | 21.85              | 21.86                | 22.21              |
|            |            | 27      | 0         | 21.29              | 21.18                | 21.19              |



VERTIAS

| LTE Band 66 |            |         |           |                                     |                                   |                                     |
|-------------|------------|---------|-----------|-------------------------------------|-----------------------------------|-------------------------------------|
| Band/BW     | Modulation | RB Size | RB Offset | Low                                 | Mid                               | High                                |
|             |            |         |           | CH 131979<br>Frequency<br>1710.7MHz | CH 132322<br>Frequency<br>1745MHz | CH 132665<br>Frequency<br>1779.3MHz |
| 66/ 1.4     | QPSK       | 1       | 0         | 23.70                               | 23.21                             | 23.47                               |
|             |            | 1       | 2         | 23.51                               | 23.53                             | 23.11                               |
|             |            | 1       | 5         | 23.08                               | 23.46                             | 23.12                               |
|             |            | 3       | 0         | 23.41                               | 23.27                             | 23.11                               |
|             |            | 3       | 1         | 23.13                               | 23.14                             | 23.16                               |
|             |            | 3       | 3         | 22.99                               | 22.99                             | 22.81                               |
|             |            | 6       | 0         | 21.78                               | 22.94                             | 21.76                               |
|             | 16QAM      | 1       | 0         | 22.52                               | 22.79                             | 22.41                               |
|             |            | 1       | 2         | 22.58                               | 22.47                             | 21.99                               |
|             |            | 1       | 5         | 21.93                               | 22.57                             | 22.04                               |
|             |            | 3       | 0         | 22.75                               | 22.28                             | 22.18                               |
|             |            | 3       | 1         | 22.17                               | 22.52                             | 21.74                               |
|             |            | 3       | 3         | 21.98                               | 22.45                             | 21.82                               |
|             |            | 6       | 0         | 21.58                               | 21.54                             | 21.05                               |
| Band/BW     | Modulation | RB Size | RB Offset | Low                                 | Mid                               | High                                |
|             |            |         |           | CH 131987<br>Frequency<br>1711.5MHz | CH 132322<br>Frequency<br>1745MHz | CH 132657<br>Frequency<br>1778.5MHz |
| 66/ 3       | QPSK       | 1       | 0         | 23.75                               | 23.21                             | 23.56                               |
|             |            | 1       | 7         | 23.53                               | 23.62                             | 23.15                               |
|             |            | 1       | 14        | 23.04                               | 23.48                             | 23.14                               |
|             |            | 8       | 0         | 22.47                               | 22.82                             | 22.07                               |
|             |            | 8       | 3         | 22.13                               | 22.91                             | 22.17                               |
|             |            | 8       | 7         | 21.88                               | 22.87                             | 21.82                               |
|             |            | 15      | 0         | 21.78                               | 22.95                             | 21.89                               |
|             | 16QAM      | 1       | 0         | 22.41                               | 22.80                             | 22.41                               |
|             |            | 1       | 7         | 22.45                               | 22.34                             | 21.89                               |
|             |            | 1       | 14        | 21.91                               | 22.65                             | 22.03                               |
|             |            | 8       | 0         | 21.67                               | 21.49                             | 21.18                               |
|             |            | 8       | 3         | 21.12                               | 21.44                             | 21.06                               |
|             |            | 8       | 7         | 21.25                               | 21.45                             | 21.07                               |
|             |            | 15      | 0         | 21.61                               | 21.64                             | 21.03                               |
| LTE Band 66 |            |         |           |                                     |                                   |                                     |
| Band/BW     | Modulation | RB Size | RB Offset | Low                                 | Mid                               | High                                |
|             |            |         |           | CH 131997<br>Frequency<br>1712.5MHz | CH 132322<br>Frequency<br>1745MHz | CH 132647<br>Frequency<br>1777.5MHz |
| 66/ 5       | QPSK       | 1       | 0         | 23.67                               | 23.23                             | 23.58                               |
|             |            | 1       | 12        | 23.60                               | 23.60                             | 23.11                               |
|             |            | 1       | 24        | 23.03                               | 23.40                             | 23.04                               |
|             |            | 12      | 0         | 22.50                               | 22.74                             | 22.20                               |
|             |            | 12      | 6         | 22.10                               | 22.91                             | 22.10                               |
|             |            | 12      | 13        | 22.00                               | 22.98                             | 21.87                               |
|             |            | 25      | 0         | 21.82                               | 22.99                             | 21.86                               |
|             | 16QAM      | 1       | 0         | 22.45                               | 22.75                             | 22.43                               |



**BUREAU VERITAS** Test Report No.: PBJ-NQN2504110217RF04

|             |            |         |           |                         |                      |                         |
|-------------|------------|---------|-----------|-------------------------|----------------------|-------------------------|
|             |            | 1       | 12        | 22.51                   | 22.36                | 21.91                   |
|             |            | 1       | 24        | 21.94                   | 22.59                | 22.07                   |
|             |            | 12      | 0         | 21.73                   | 21.33                | 21.04                   |
|             |            | 12      | 6         | 21.26                   | 21.69                | 21.17                   |
|             |            | 12      | 13        | 21.19                   | 21.45                | 21.08                   |
|             |            | 25      | 0         | 21.52                   | 21.67                | 21.00                   |
| Band/BW     | Modulation | RB Size | RB Offset | Low<br>CH 132022        | Mid<br>CH 132322     | High<br>CH 132622       |
|             |            |         |           | Frequency<br>1715MHz    | Frequency<br>1745MHz | Frequency<br>1775MHz    |
| 66/ 10      | QPSK       | 1       | 0         | 23.69                   | 23.28                | 23.56                   |
|             |            | 1       | 24        | 23.53                   | 23.51                | 23.08                   |
|             |            | 1       | 49        | 23.04                   | 23.43                | 23.08                   |
|             |            | 25      | 0         | 22.49                   | 22.73                | 22.10                   |
|             |            | 25      | 12        | 22.09                   | 22.93                | 22.15                   |
|             |            | 25      | 25        | 22.00                   | 22.92                | 21.80                   |
|             |            | 50      | 0         | 21.89                   | 23.01                | 21.84                   |
|             | 16QAM      | 1       | 0         | 22.48                   | 22.85                | 22.53                   |
|             |            | 1       | 12        | 22.48                   | 22.40                | 21.96                   |
|             |            | 1       | 24        | 21.98                   | 22.55                | 22.04                   |
|             |            | 12      | 0         | 22.67                   | 22.40                | 22.06                   |
|             |            | 12      | 18        | 22.24                   | 22.40                | 21.76                   |
|             |            | 12      | 37        | 22.12                   | 22.36                | 21.86                   |
|             |            | 27      | 0         | 21.58                   | 21.66                | 21.08                   |
| LTE Band 66 |            |         |           |                         |                      |                         |
| Band/BW     | Modulation | RB Size | RB Offset | Low<br>CH 132047        | Mid<br>CH 132322     | High<br>CH 132597       |
|             |            |         |           | Frequency<br>1717.5 MHz | Frequency<br>1745MHz | Frequency<br>1772.5 MHz |
| 66/ 15      | QPSK       | 1       | 0         | 23.76                   | 23.21                | 23.47                   |
|             |            | 1       | 37        | 23.55                   | 23.50                | 23.22                   |
|             |            | 1       | 74        | 23.04                   | 23.38                | 23.09                   |
|             |            | 36      | 0         | 22.51                   | 22.78                | 22.21                   |
|             |            | 36      | 19        | 22.20                   | 22.91                | 22.24                   |
|             |            | 36      | 39        | 21.96                   | 22.97                | 21.92                   |
|             |            | 75      | 0         | 21.87                   | 22.96                | 21.79                   |
|             | 16QAM      | 1       | 0         | 22.41                   | 22.80                | 22.43                   |
|             |            | 1       | 12        | 22.59                   | 22.38                | 21.89                   |
|             |            | 1       | 24        | 21.98                   | 22.54                | 22.06                   |
|             |            | 12      | 0         | 22.67                   | 22.32                | 22.14                   |
|             |            | 12      | 31        | 22.19                   | 22.51                | 21.74                   |
|             |            | 12      | 62        | 22.07                   | 22.41                | 21.86                   |
|             |            | 27      | 0         | 21.57                   | 21.62                | 21.09                   |
| Band/BW     | Modulation | RB Size | RB Offset | Low<br>CH 132072        | Mid<br>CH 132322     | High<br>CH 132572       |
|             |            |         |           | Frequency<br>1720MHz    | Frequency<br>1745MHz | Frequency<br>1770MHz    |
| 66/ 20      | QPSK       | 1       | 0         | 23.79                   | 23.31                | 23.61                   |
|             |            | 1       | 50        | 23.62                   | 23.65                | 23.23                   |
|             |            | 1       | 99        | 23.17                   | 23.49                | 23.18                   |
|             |            | 50      | 0         | 22.55                   | 22.87                | 22.22                   |



**BUREAU VERITAS** Test Report No.: PBJ-NQN2504110217RF04

|  |       |     |    |       |       |       |
|--|-------|-----|----|-------|-------|-------|
|  |       | 50  | 25 | 22.23 | 23.01 | 22.25 |
|  |       | 50  | 50 | 22.01 | 23.00 | 21.95 |
|  |       | 100 | 0  | 21.93 | 23.08 | 21.90 |
|  | 16QAM | 1   | 0  | 22.55 | 22.89 | 22.54 |
|  |       | 1   | 50 | 22.60 | 22.49 | 22.03 |
|  |       | 1   | 99 | 22.06 | 22.68 | 22.17 |
|  |       | 12  | 0  | 22.81 | 22.42 | 22.19 |
|  |       | 12  | 43 | 22.26 | 22.53 | 21.82 |
|  |       | 12  | 87 | 22.13 | 22.48 | 21.90 |
|  |       | 27  | 0  | 21.64 | 21.68 | 21.14 |

**EIRP****LTE BAND 4****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          | 23.42                 | 3                                   | 26.42      | 438.53    | 1         |
| 20175   | 1732.5          | 23.02                 | 3                                   | 26.02      | 399.94    | 1         |
| 20393   | 1754.3          | 23.28                 | 3                                   | 26.28      | 424.62    | 1         |

**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          | 22.51                 | 3                                   | 25.51      | 355.63    | 1         |
| 20175   | 1732.5          | 22.33                 | 3                                   | 25.33      | 341.19    | 1         |
| 20393   | 1754.3          | 22.52                 | 3                                   | 25.52      | 356.45    | 1         |

**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          | 23.51                 | 3                                   | 26.51      | 447.71    | 1         |
| 20175   | 1732.5          | 23.07                 | 3                                   | 26.07      | 404.58    | 1         |
| 20385   | 1753.5          | 23.27                 | 3                                   | 26.27      | 423.64    | 1         |

**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          | 22.41                 | 3                                   | 25.41      | 347.54    | 1         |
| 20175   | 1732.5          | 22.12                 | 3                                   | 25.12      | 325.09    | 1         |
| 20385   | 1753.5          | 22.59                 | 3                                   | 25.59      | 362.24    | 1         |

**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          | 23.50                 | 3                                   | 26.50      | 446.68    | 1         |
| 20175   | 1732.5          | 23.04                 | 3                                   | 26.04      | 401.79    | 1         |
| 20375   | 1752.5          | 23.25                 | 3                                   | 26.25      | 421.70    | 1         |

**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          | 22.45                 | 3                                   | 25.45      | 350.75    | 1         |
| 20175   | 1732.5          | 22.14                 | 3                                   | 25.14      | 326.59    | 1         |
| 20375   | 1752.5          | 22.65                 | 3                                   | 25.65      | 367.28    | 1         |



| 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            | 23.52                 | 3                                   | 26.52      | 448.75    | 1         |
| 20175      | 1732.5          | 23.09                 | 3                                   | 26.09      | 406.44    | 1         |
| 20350      | 1750            | 23.27                 | 3                                   | 26.27      | 423.64    | 1         |

| 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                 | 3                                   | 25.42      | 348.34    | 1         |
| 20175       | 1732.5          | 22.05                 | 3                                   | 25.05      | 319.89    | 1         |
| 20350       | 1750            | 22.61                 | 3                                   | 25.61      | 363.92    | 1         |

| 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          | 23.49                 | 3                                   | 26.49      | 445.66    | 1         |
| 20175      | 1732.5          | 23.02                 | 3                                   | 26.02      | 399.94    | 1         |
| 20325      | 1747.5          | 23.18                 | 3                                   | 26.18      | 414.95    | 1         |

| 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          | 22.48                 | 3                                   | 25.48      | 353.18    | 1         |
| 20175       | 1732.5          | 22.02                 | 3                                   | 25.02      | 317.69    | 1         |
| 20325       | 1747.5          | 22.56                 | 3                                   | 25.56      | 359.75    | 1         |

| 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            | 23.57                 | 3                                   | 26.57      | 453.94    | 1         |
| 20175      | 1732.5          | 23.12                 | 3                                   | 26.12      | 409.26    | 1         |
| 20300      | 1745            | 23.32                 | 3                                   | 26.32      | 428.55    | 1         |

| 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            | 22.55                 | 3                                   | 25.55      | 358.92    | 1         |
| 20175       | 1732.5          | 22.15                 | 3                                   | 25.15      | 327.34    | 1         |
| 20300       | 1745            | 22.66                 | 3                                   | 25.66      | 368.13    | 1         |

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



| LTE BAND 66 |                 |                       |                                     |            |           |           |
|-------------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 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          | 23.70                 | 3                                   | 26.70      | 467.74    | 1         |
| 132322      | 1745            | 23.53                 | 3                                   | 26.53      | 449.78    | 1         |
| 132665      | 1779.3          | 23.47                 | 3                                   | 26.47      | 443.61    | 1         |

| 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          | 22.75                 | 3                                   | 25.75      | 375.84    | 1         |
| 132322       | 1745            | 22.79                 | 3                                   | 25.79      | 379.31    | 1         |
| 132665       | 1779.3          | 22.41                 | 3                                   | 25.41      | 347.54    | 1         |

| 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          | 23.75                 | 3                                   | 26.75      | 473.15    | 1         |
| 132322    | 1745            | 23.62                 | 3                                   | 26.62      | 459.20    | 1         |
| 132657    | 1778.5          | 23.56                 | 3                                   | 26.56      | 452.90    | 1         |

| 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          | 22.45                 | 3                                   | 25.45      | 350.43    | 1         |
| 132322     | 1745            | 22.80                 | 3                                   | 25.80      | 380.19    | 1         |
| 132657     | 1778.5          | 22.41                 | 3                                   | 25.41      | 347.54    | 1         |

| 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          | 23.67                 | 3                                   | 26.67      | 464.52    | 1         |
| 132322    | 1745            | 23.60                 | 3                                   | 26.60      | 457.09    | 1         |
| 132647    | 1777.5          | 23.58                 | 3                                   | 26.58      | 454.99    | 1         |

| 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          | 22.51                 | 3                                   | 25.51      | 355.30    | 1         |
| 132322     | 1745            | 22.75                 | 3                                   | 25.75      | 375.84    | 1         |
| 132647     | 1777.5          | 22.43                 | 3                                   | 25.43      | 349.14    | 1         |



## 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            | 23.69                 | 3                                   | 26.69      | 466.66    | 1         |
| 132322  | 1745            | 23.51                 | 3                                   | 26.51      | 447.71    | 1         |
| 132622  | 1775            | 23.56                 | 3                                   | 26.56      | 452.90    | 1         |

## 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            | 22.67                 | 3                                   | 25.67      | 368.98    | 1         |
| 132322  | 1745            | 22.85                 | 3                                   | 25.85      | 384.59    | 1         |
| 132622  | 1775            | 22.53                 | 3                                   | 25.53      | 357.27    | 1         |

## 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          | 23.76                 | 3                                   | 26.76      | 474.24    | 1         |
| 132322  | 1745            | 23.50                 | 3                                   | 26.50      | 446.68    | 1         |
| 132597  | 1772.5          | 23.47                 | 3                                   | 26.47      | 443.61    | 1         |

## 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          | 22.67                 | 3                                   | 25.67      | 368.98    | 1         |
| 132322  | 1745            | 22.80                 | 3                                   | 25.80      | 380.19    | 1         |
| 132597  | 1772.5          | 22.43                 | 3                                   | 25.43      | 349.14    | 1         |

## 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            | 23.79                 | 3                                   | 26.79      | 477.53    | 1         |
| 132322  | 1745            | 23.65                 | 3                                   | 26.65      | 462.38    | 1         |
| 132572  | 1770            | 23.61                 | 3                                   | 26.61      | 458.14    | 1         |

## 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            | 22.81                 | 3                                   | 25.81      | 381.07    | 1         |
| 132322  | 1745            | 22.89                 | 3                                   | 25.89      | 388.15    | 1         |
| 132572  | 1770            | 22.54                 | 3                                   | 25.54      | 358.10    | 1         |

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



## 3.2 FREQUENCY STABILITY MEASUREMENT

### 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

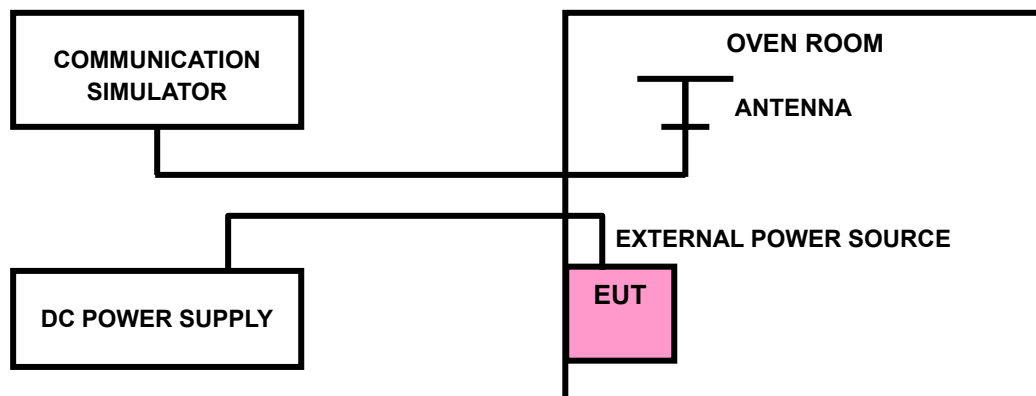
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

### 3.2.2 TEST PROCEDURE

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

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

### 3.2.3 TEST SETUP



### 3.2.4 TEST RESULTS

Please Refer to Appendix Of this test report.

Note: VL = Low voltage(3.4V); VN/NV = Normal voltage(3.8V); VH = High voltage(4.2V); NT = Normal temperature (25°C)

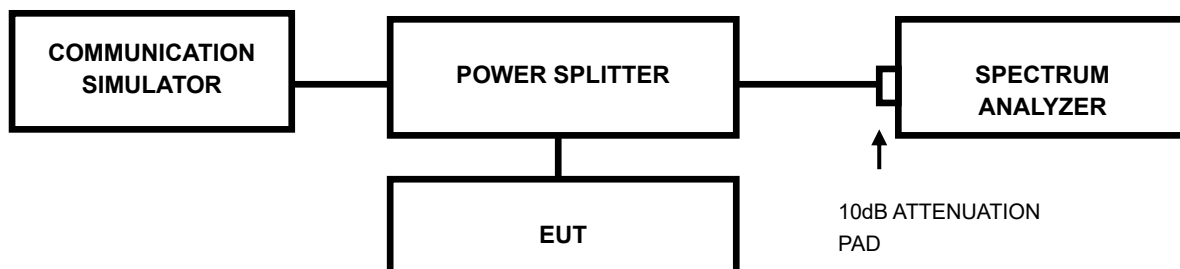


### 3.3 OCCUPIED BANDWIDTH MEASUREMENT

#### 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.

#### 3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.



### 3.4 BAND EDGE MEASUREMENT

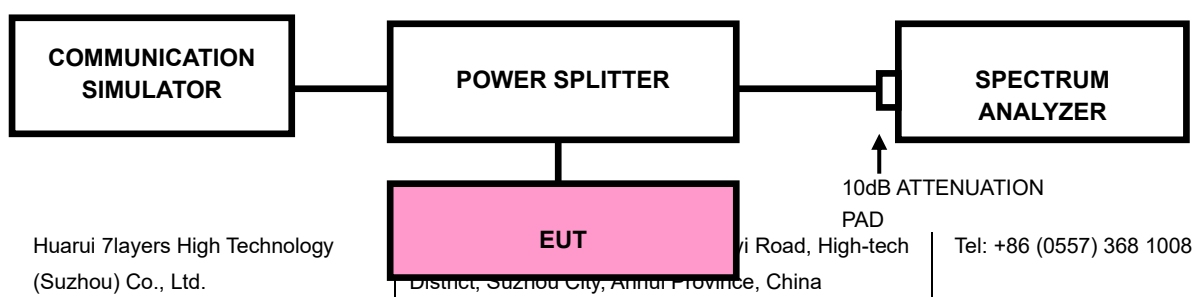
#### 3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 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.

#### 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)  $\geq 1\%$  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  $\geq 3 \times$  RBW.
- f) Select the average power (RMS) display detector.
- g) Set the number of measurement points to  $\geq 1001$ .
- 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.

### 3.4.4 TEST RESULTS

Please Refer to Appendix Of this test report.



### 3.5 CONDUCTED SPURIOUS EMISSIONS

#### 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

For LTE Band4/66

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 is equal to  $-13\text{dBm}$ .

For: LTE Band42

For mobile operations in the 3450–3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed  $-13\text{ dBm/MHz}$ .

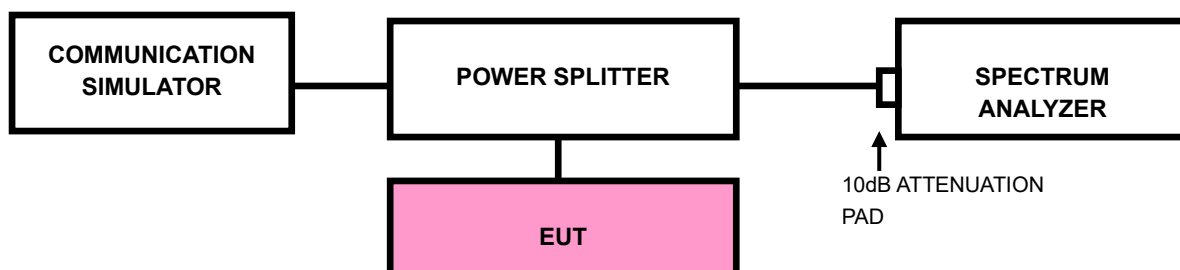
For LTE Band38/41

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





### 3.5.4 TEST RESULTS

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

Please Refer to Appendix Of this test report.

### 3.6 RADIATED EMISSION MEASUREMENT

#### 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

For LTE Band4/66

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 is equal to  $-13\text{dBm}$ .

For: LTE Band42

For mobile operations in the 3450–3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed  $-13\text{ dBm/MHz}$ .

For LTE Band38/41

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.

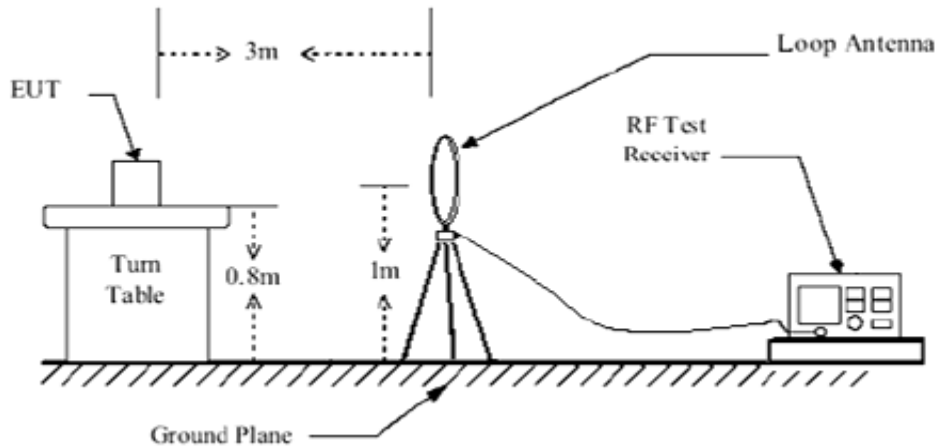
#### 3.6.3 DEVIATION FROM TEST STANDARD

No deviation

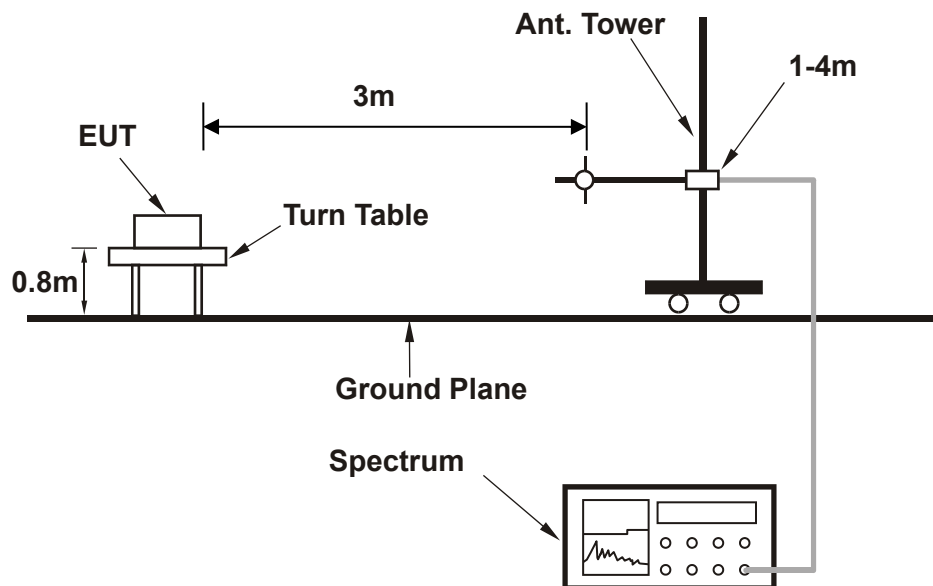


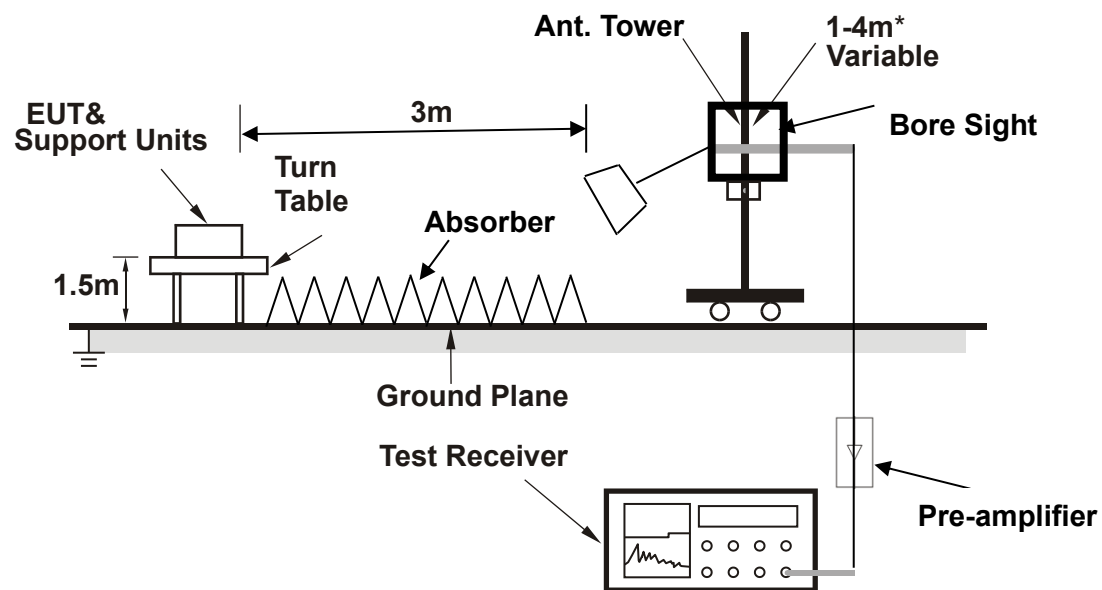
### 3.6.4 TEST SETUP

#### < Frequency Range below 30MHz >



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





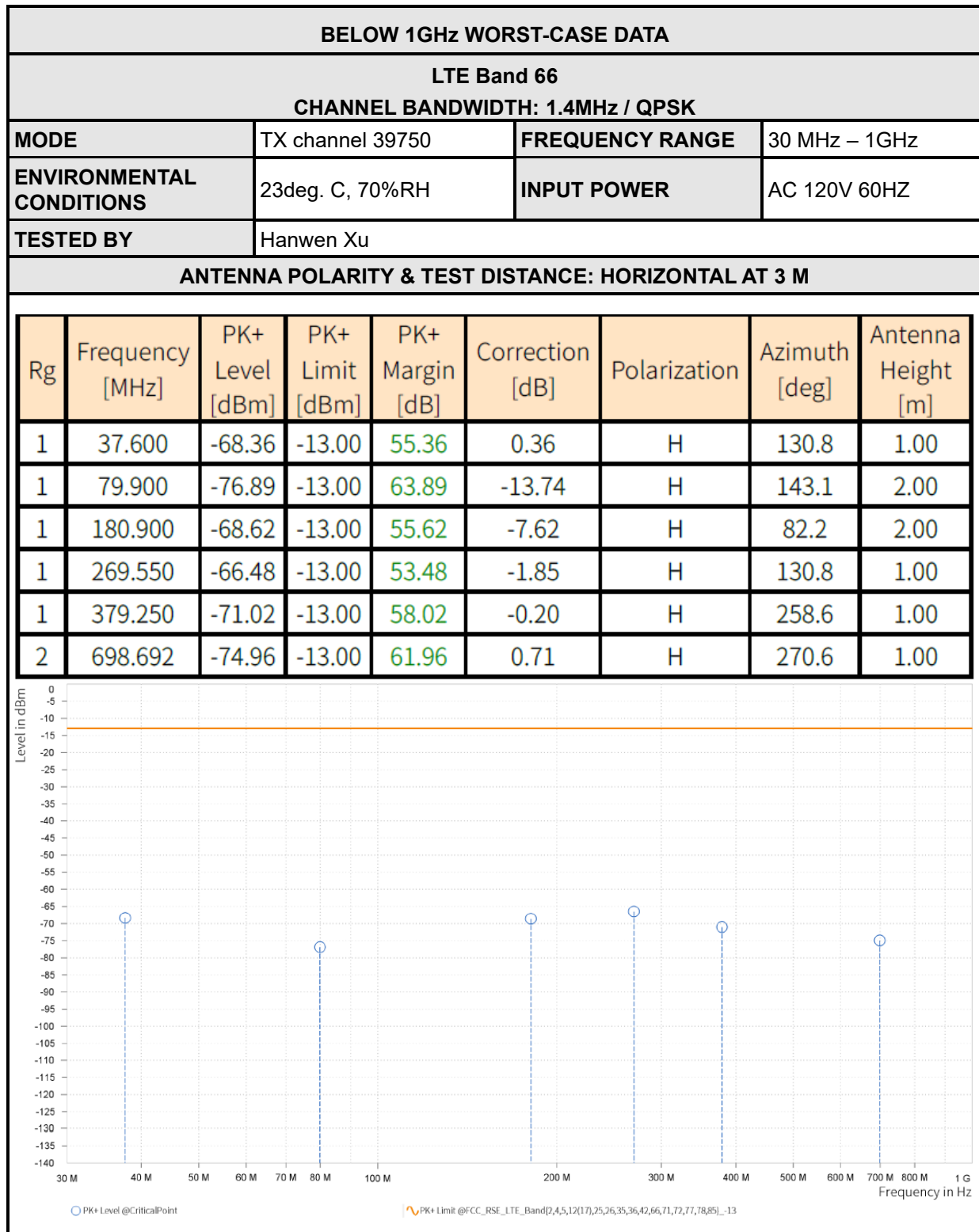
**Note:** Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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.

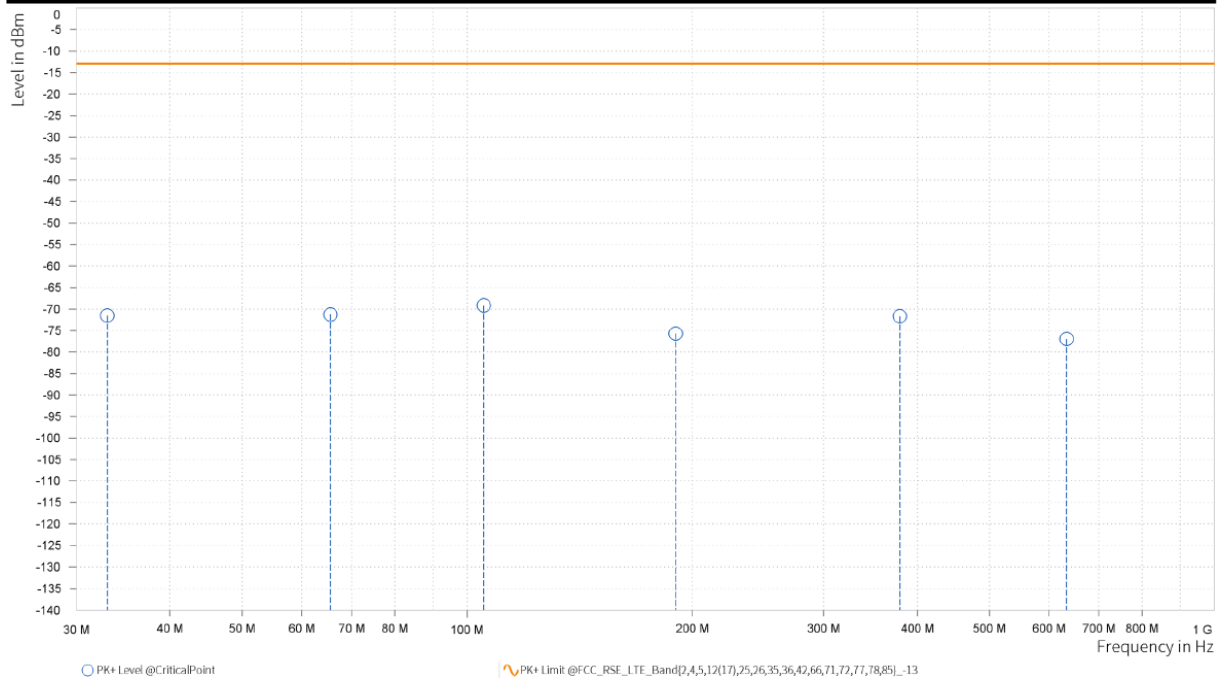




|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| MODE                     | TX channel 39750 | FREQUENCY RANGE | 30 MHz – 1GHz |
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH  | INPUT POWER     | AC 120V 60HZ  |
| TESTED BY                | Hanwen Xu        |                 |               |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 1  | 33.000          | -71.50          | -13.00          | 58.50           | -6.32           | V            | 213.2         | 1.00               |
| 1  | 65.600          | -71.23          | -13.00          | 58.23           | -7.27           | V            | 45.2          | 2.00               |
| 1  | 105.200         | -69.16          | -13.00          | 56.16           | 4.10            | V            | 305.3         | 1.00               |
| 1  | 190.100         | -75.70          | -13.00          | 62.70           | -8.73           | V            | 122.4         | 1.00               |
| 1  | 379.100         | -71.65          | -13.00          | 58.65           | 0.02            | V            | 184.6         | 1.00               |
| 2  | 634.158         | -76.98          | -13.00          | 63.98           | -0.70           | V            | 283           | 2.00               |





ABOVE 1GHz

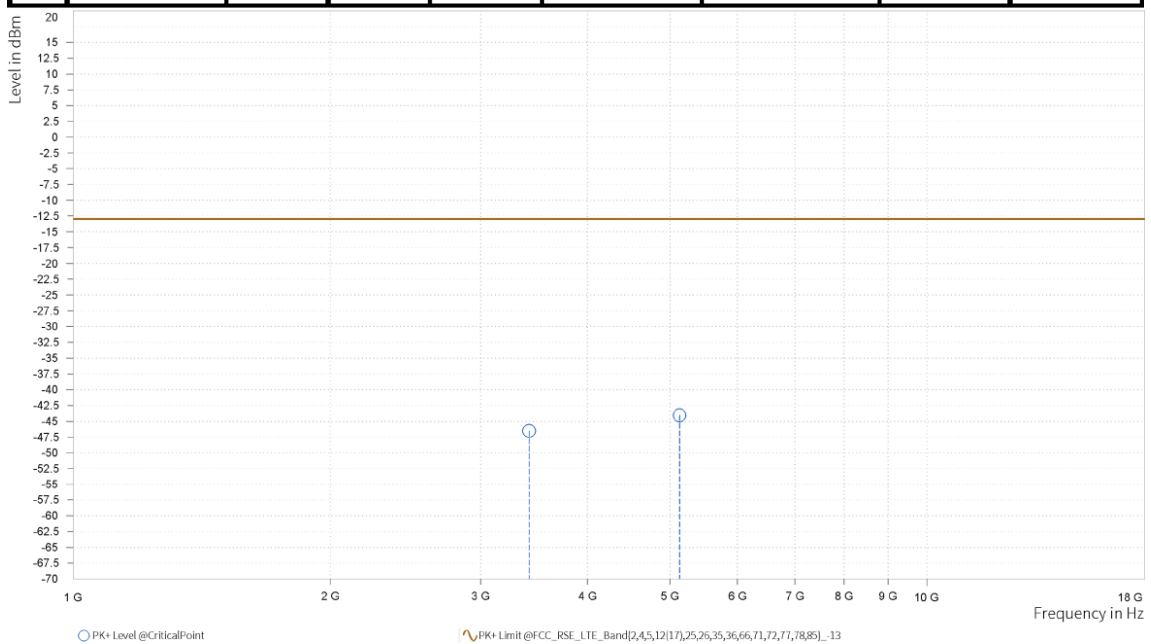
**Note:** For higher frequency, the emission is too low to be detected.

LTE Band66

|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 1.4MHz / QPSK | MODE                     | TX channel 131979 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,420.140       | -46.50          | -13.00          | 33.50           | 26.77           | H            | 1             | 1.00               |
| 4  | 5,130.210       | -44.04          | -13.00          | 31.04           | 30.97           | H            | 125           | 2.00               |

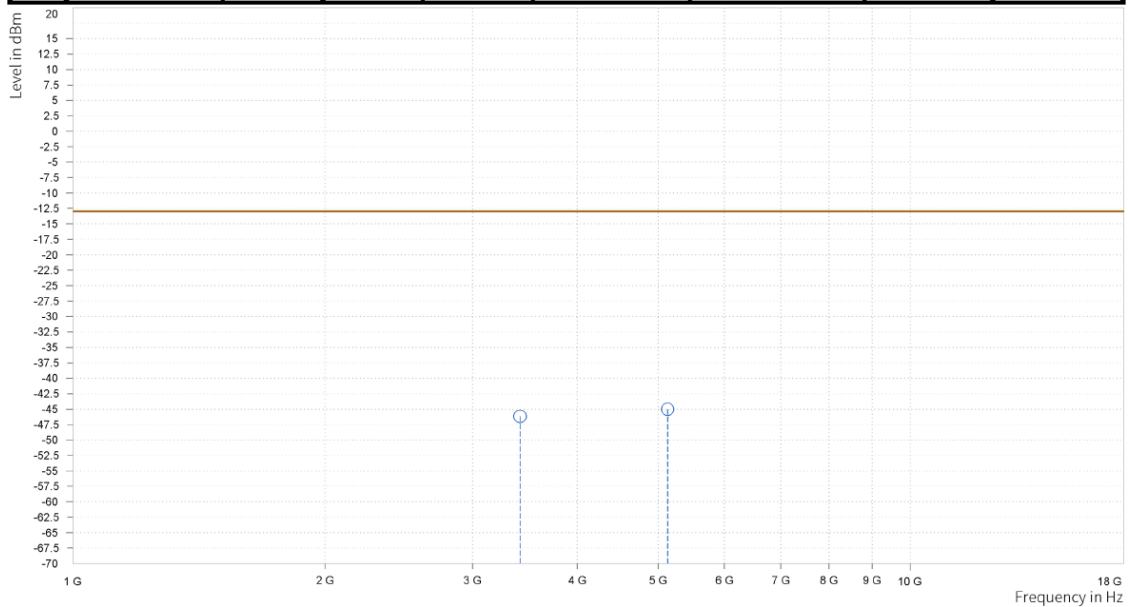




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 1.4MHz / QPSK | MODE                     | TX channel 131979 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,420.140       | -46.16          | -13.00          | 33.16           | 26.58           | V            | 359.1         | 1.00               |
| 4  | 5,130.210       | -45.00          | -13.00          | 32.00           | 30.84           | V            | 1             | 1.00               |

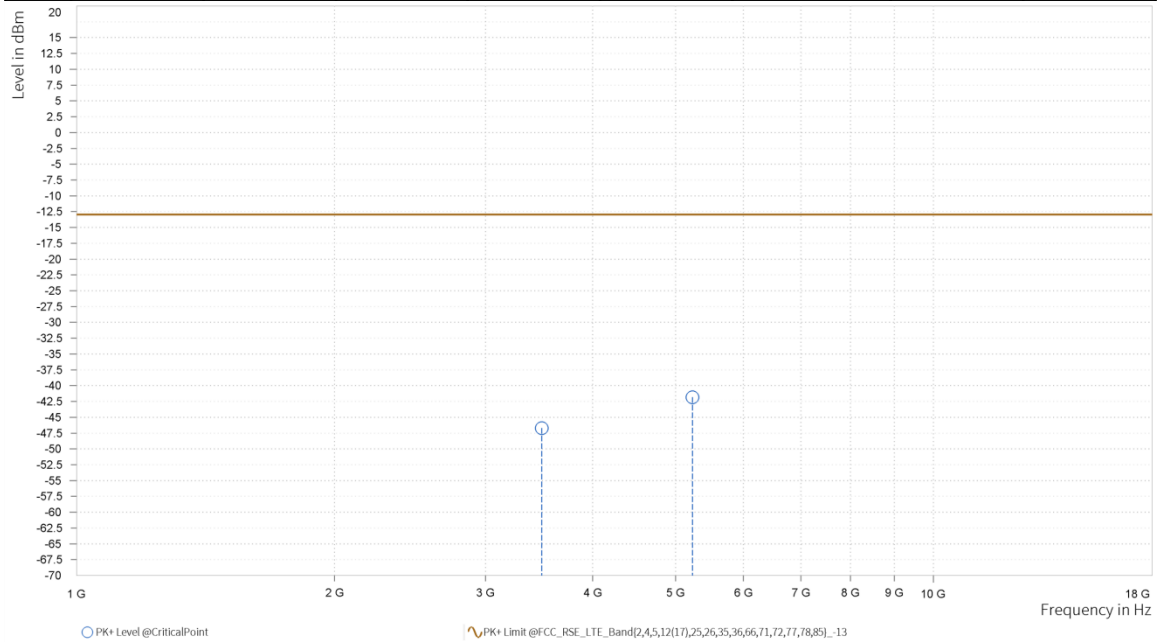




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 1.4MHz / QPSK | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,488.740       | -46.70          | -13.00          | 33.70           | 26.26           | H            | 0.9           | 2.00               |
| 4  | 5,233.110       | -41.83          | -13.00          | 28.83           | 33.18           | H            | 359.1         | 1.00               |

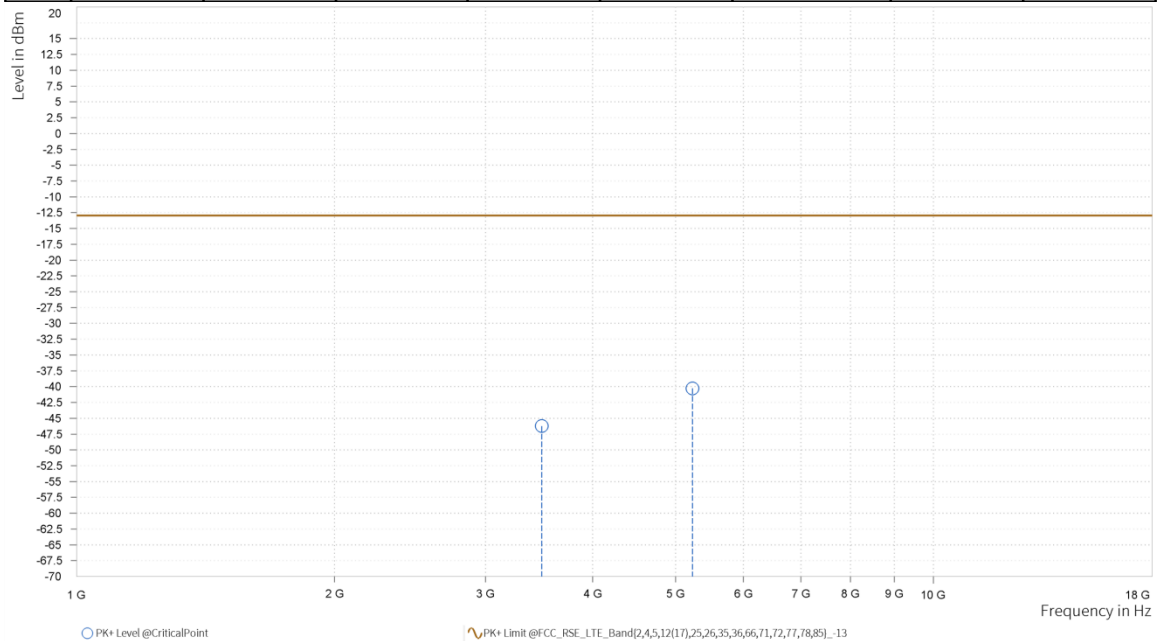




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 1.4MHz / QPSK | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,488.740       | -46.22          | -13.00          | 33.22           | 26.03           | V            | 103.6         | 2.00               |
| 4  | 5,233.110       | -40.26          | -13.00          | 27.26           | 33.15           | V            | 359.1         | 1.00               |

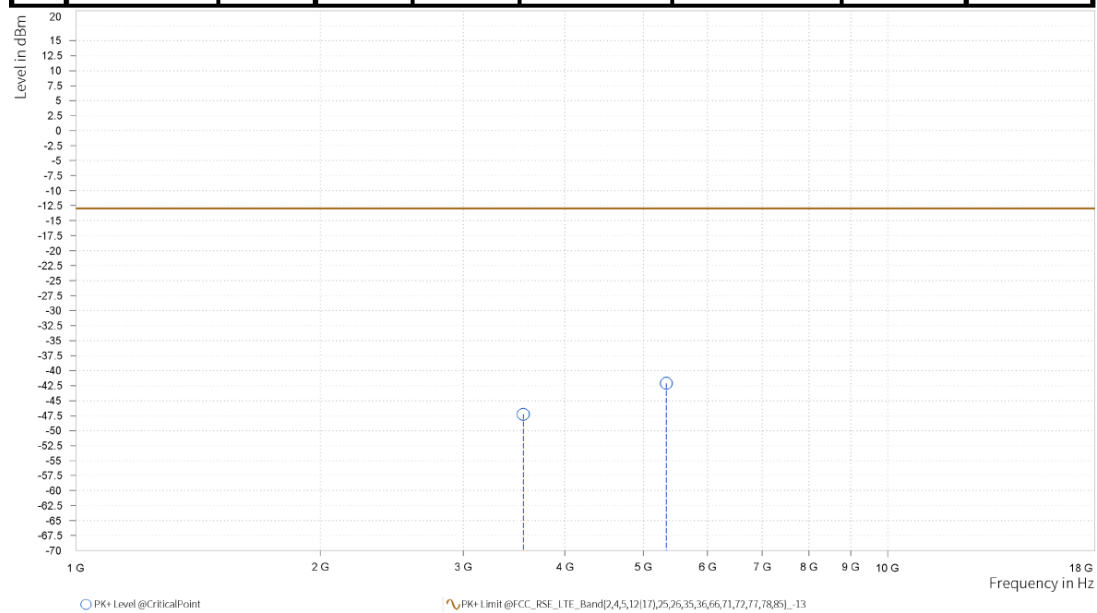




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 1.4MHz / QPSK | MODE                     | TX channel 132665 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,557.340       | -47.26          | -13.00          | 34.26           | 26.27           | H            | 359           | 2.00               |
| 4  | 5,336.010       | -42.12          | -13.00          | 29.12           | 32.94           | H            | 238.6         | 1.00               |

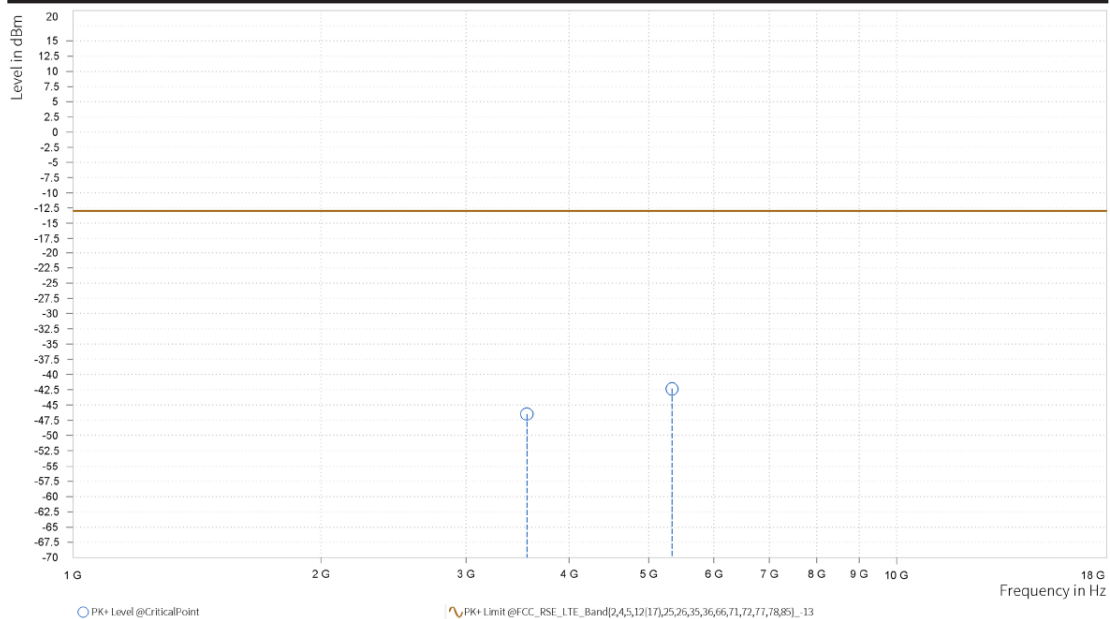




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 1.4MHz / QPSK | MODE                     | TX channel 132665 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,557.340       | -46.48          | -13.00          | 33.48           | 26.20           | V            | 1             | 2.00               |
| 4  | 5,336.010       | -42.32          | -13.00          | 29.32           | 32.79           | V            | 233.8         | 1.00               |

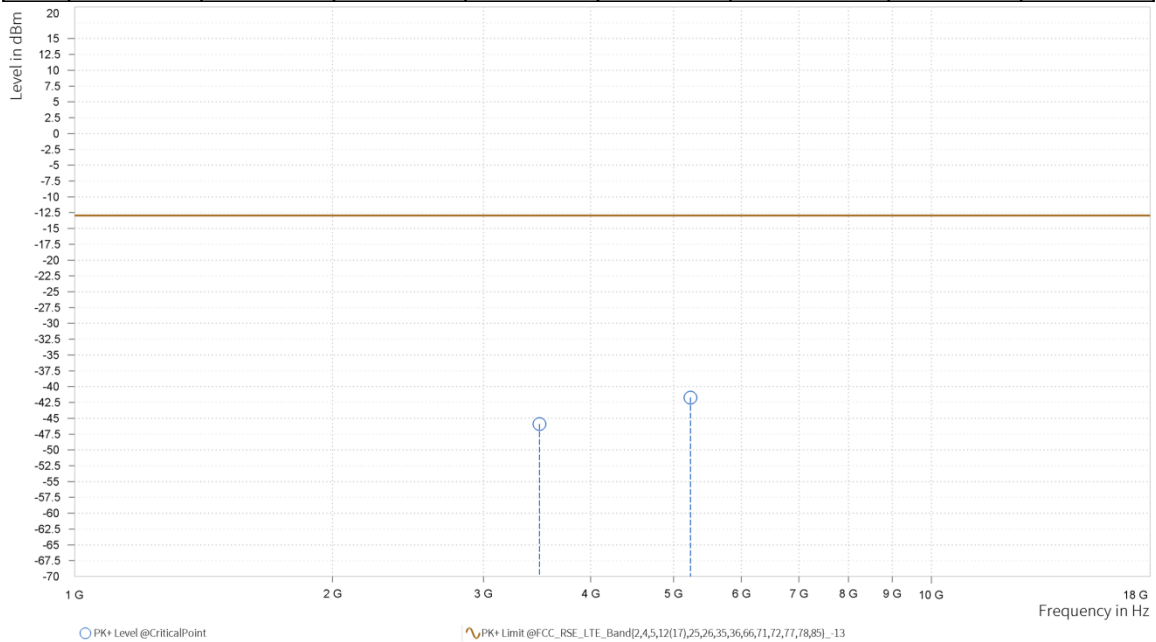




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 3MHz / QPSK   | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,487.300       | -45.91          | -13.00          | 32.91           | 26.27           | H            | 1             | 1.00               |
| 4  | 5,230.950       | -41.72          | -13.00          | 28.72           | 33.48           | H            | 113           | 2.00               |

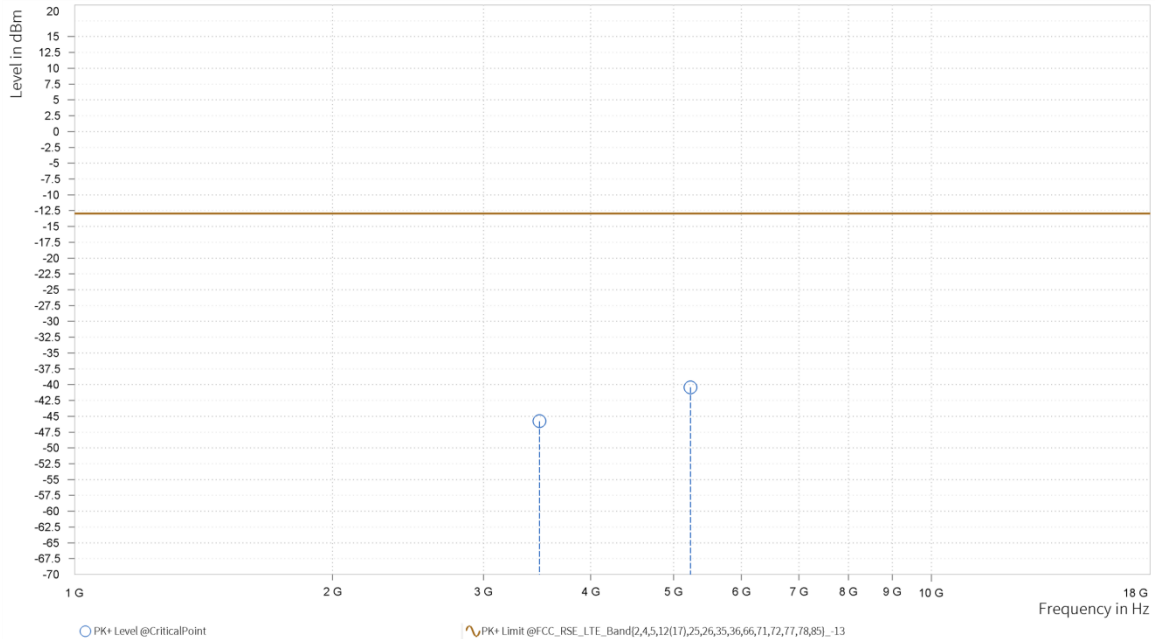




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 3MHz / QPSK   | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,487.300       | -45.77          | -13.00          | 32.77           | 26.04           | V            | 359           | 2.00               |
| 4  | 5,230.950       | -40.41          | -13.00          | 27.41           | 33.45           | V            | 359.1         | 1.00               |

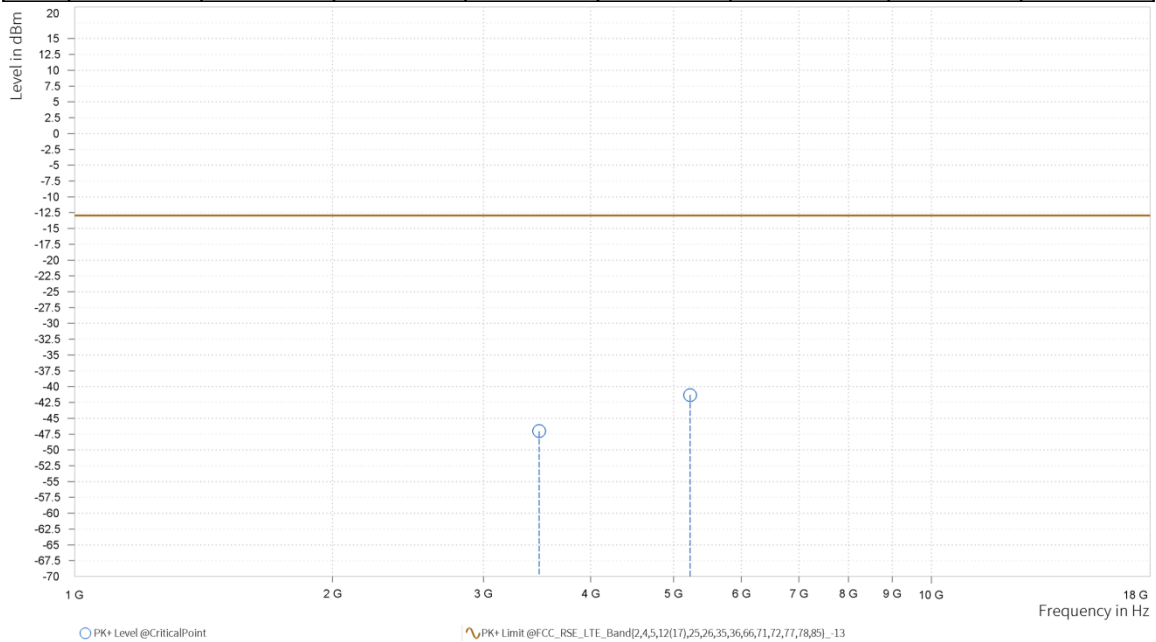




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 5MHz / QPSK   | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |
| TESTED BY         | Hanwen Xu     |                          |                   |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,485.500       | -47.04          | -13.00          | 34.04           | 26.29           | H            | 359           | 2.00               |
| 4  | 5,228.250       | -41.32          | -13.00          | 28.32           | 33.39           | H            | 1             | 1.00               |

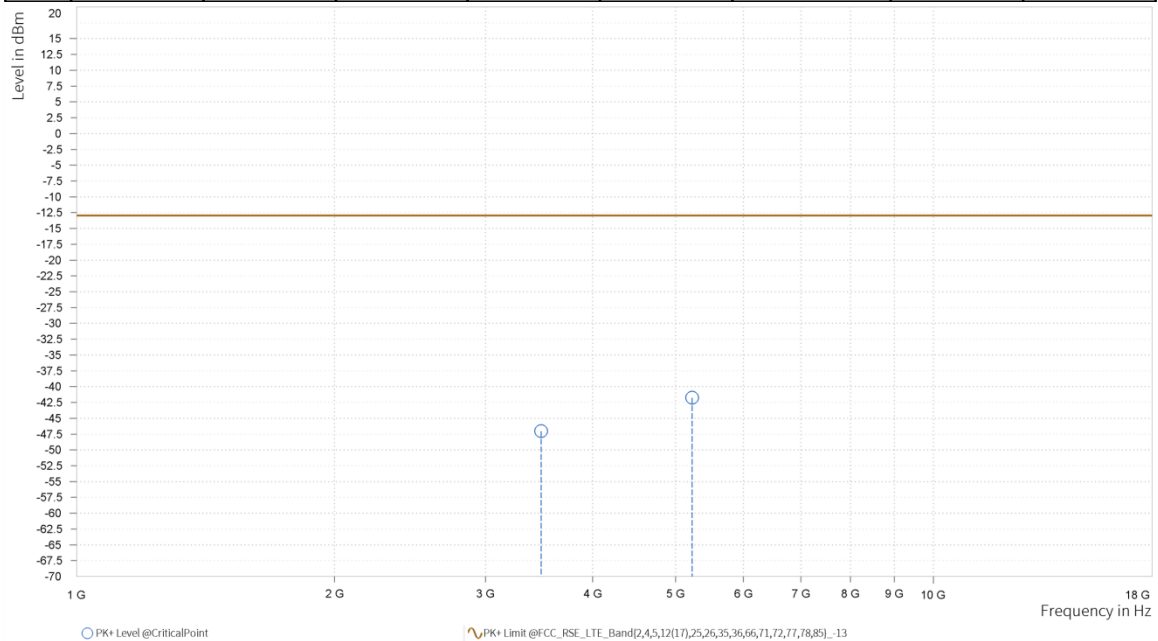




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 5MHz / QPSK   | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,485.500       | -47.04          | -13.00          | 34.04           | 26.06           | V            | 359           | 2.00               |
| 4  | 5,228.250       | -41.76          | -13.00          | 28.76           | 33.37           | V            | 108.3         | 2.00               |

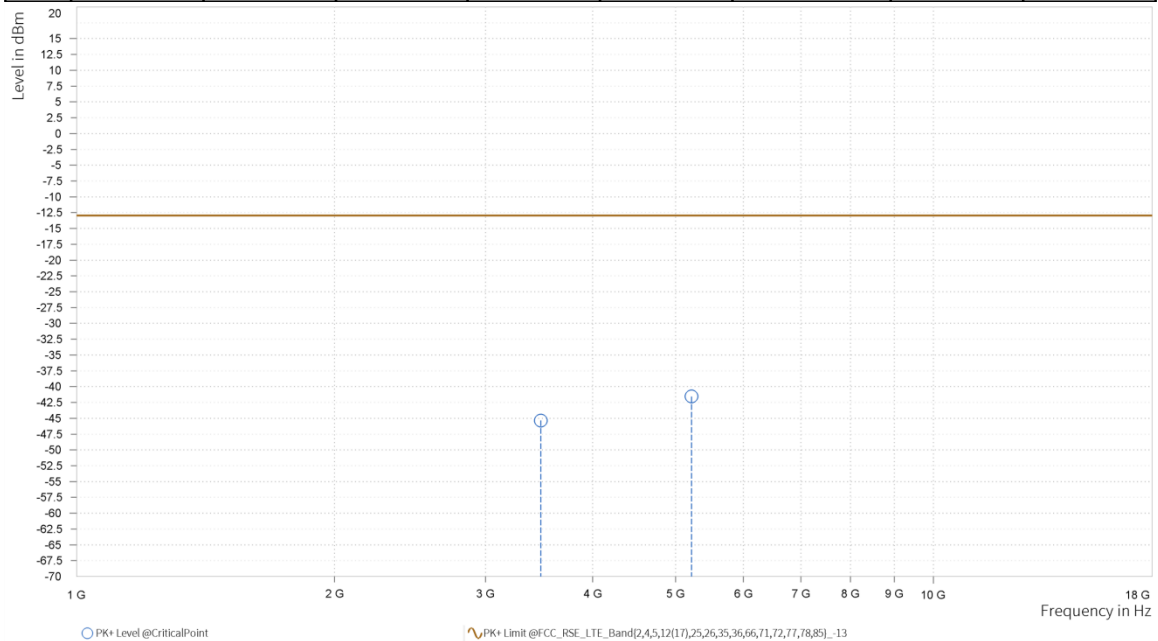




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 10MHz / QPSK  | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,481.000       | -45.35          | -13.00          | 32.35           | 26.35           | H            | 1             | 2.00               |
| 4  | 5,221.500       | -41.55          | -13.00          | 28.55           | 32.64           | H            | 359.1         | 1.00               |

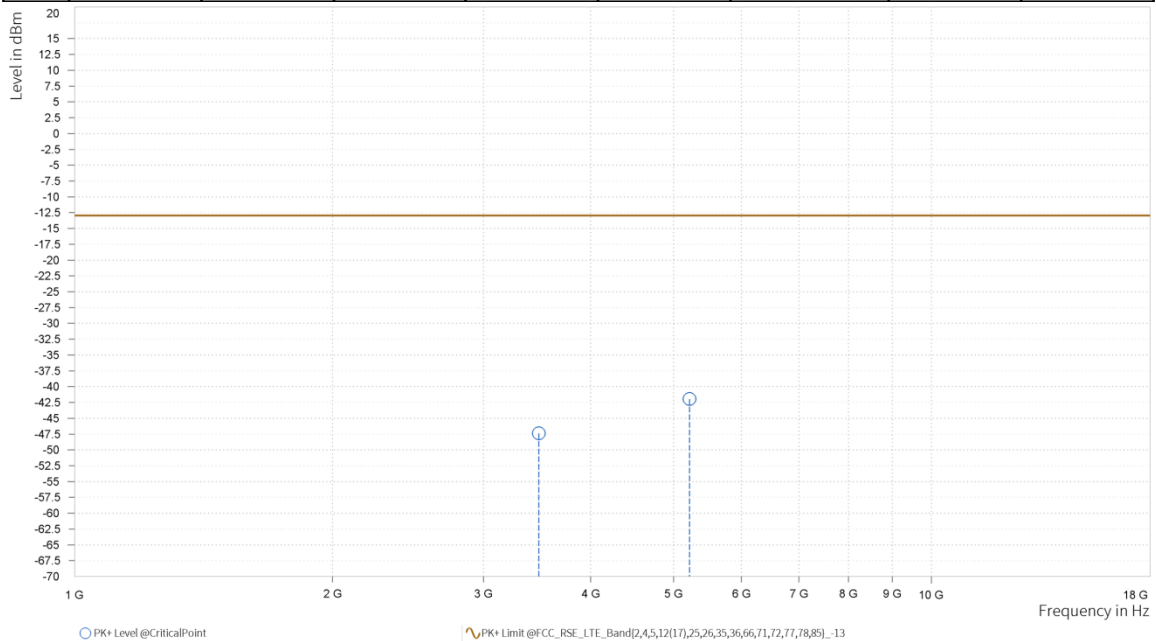




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 10MHz / QPSK  | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,481.000       | -47.39          | -13.00          | 34.39           | 26.10           | V            | 359           | 2.00               |
| 4  | 5,221.500       | -41.96          | -13.00          | 28.96           | 32.62           | V            | 117.8         | 2.00               |

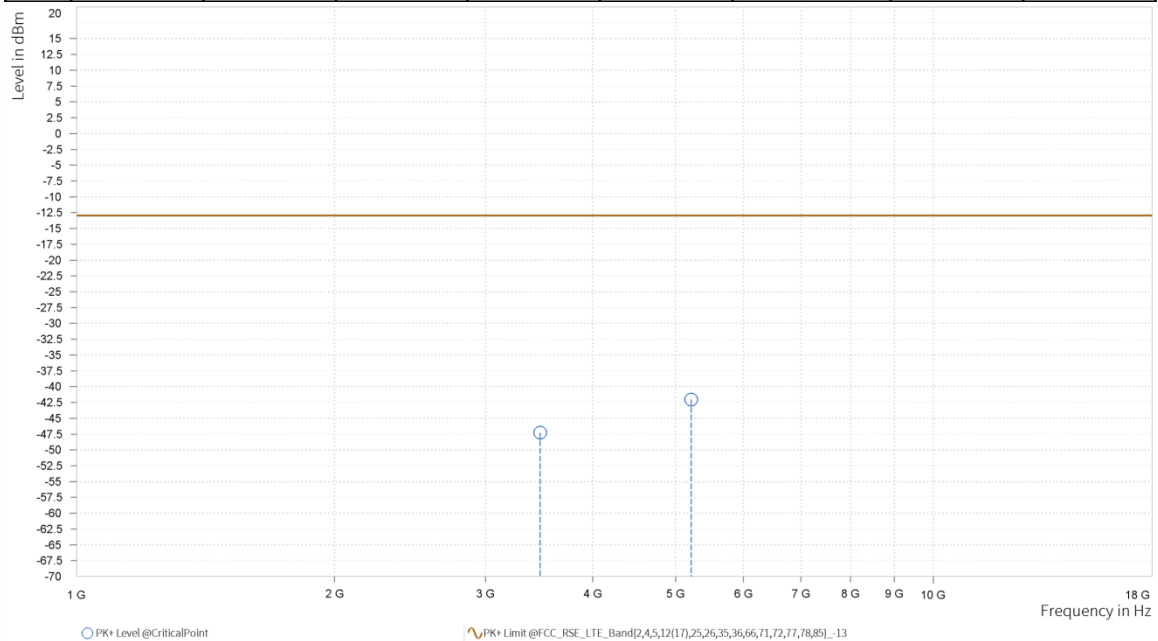




|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 15MHz / QPSK  | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

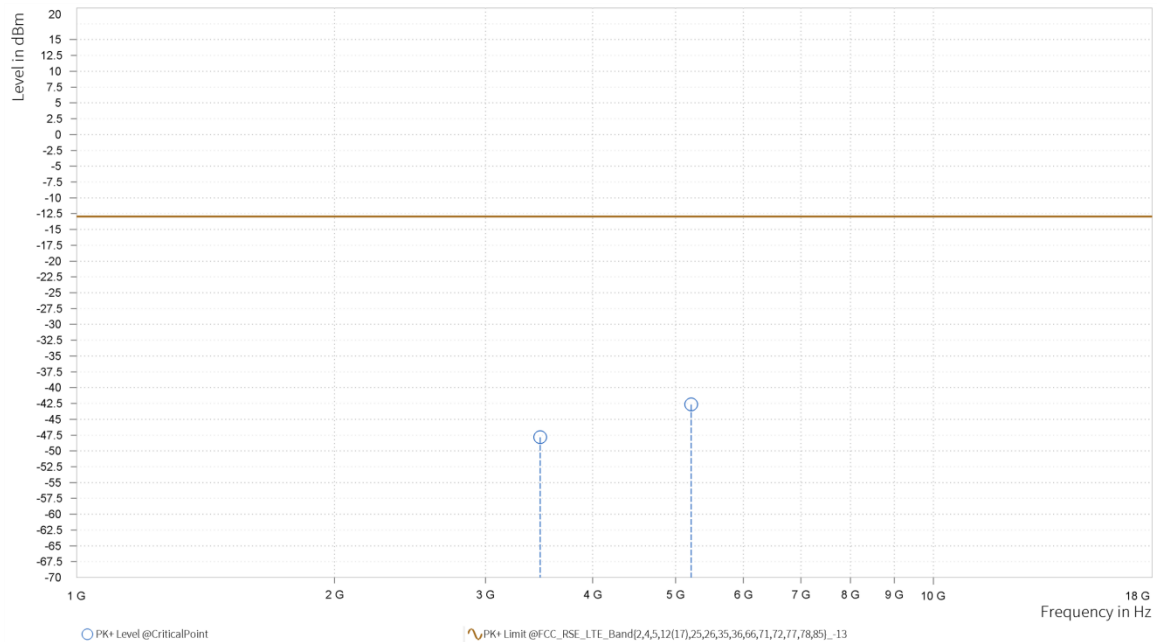
| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,476.500       | -47.29          | -13.00          | 34.29           | 26.32           | H            | 359           | 2.00               |
| 4  | 5,214.750       | -42.04          | -13.00          | 29.04           | 32.12           | H            | 1             | 1.00               |





|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 15MHz / QPSK  | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

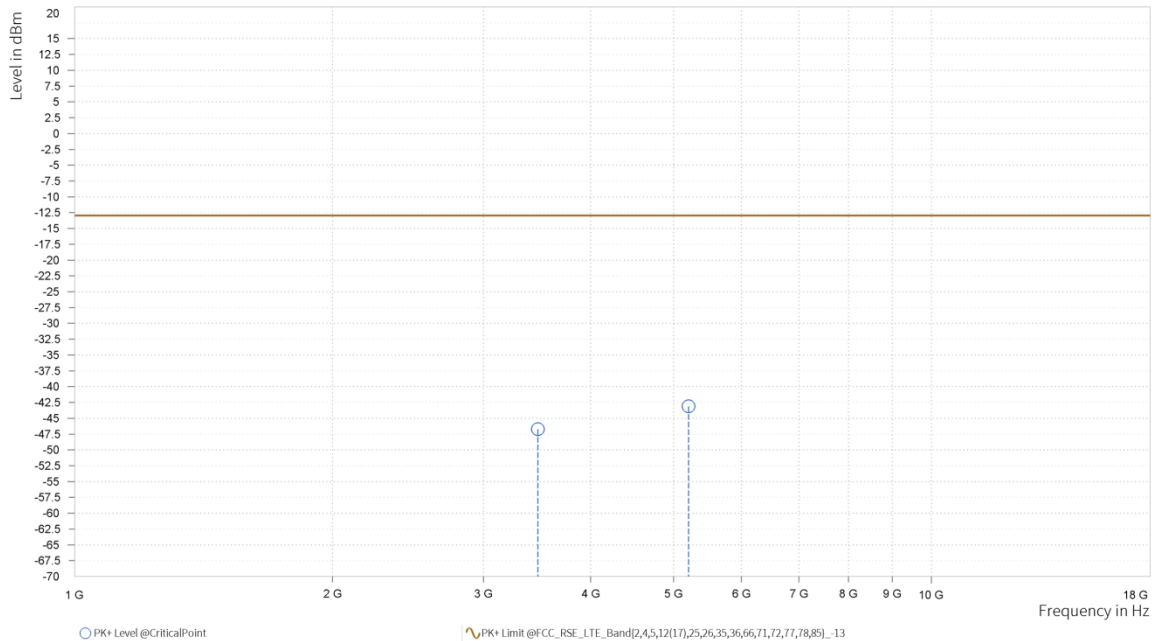


| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,476.500       | -47.84          | -13.00          | 34.84           | 26.06           | V            | 249.4         | 1.00               |
| 4  | 5,214.750       | -42.66          | -13.00          | 29.66           | 32.11           | V            | 359           | 1.00               |



|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 20MHz / QPSK  | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

## ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M



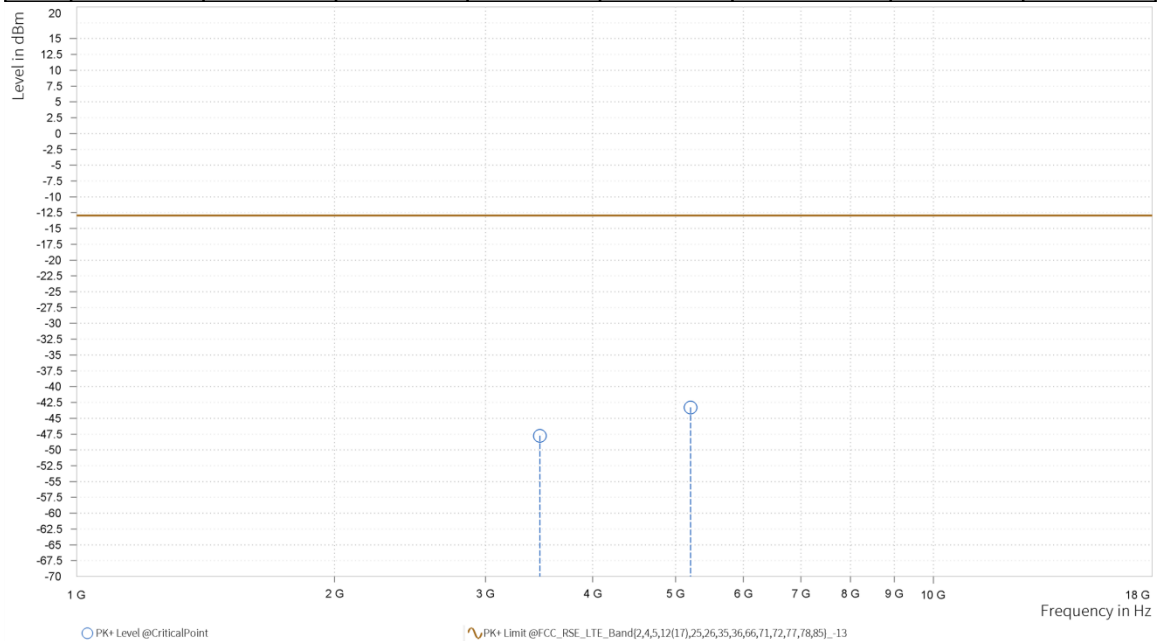
| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,472.000       | -46.73          | -13.00          | 33.73           | 26.27           | H            | 359           | 2.00               |
| 4  | 5,208.000       | -43.11          | -13.00          | 30.11           | 31.90           | H            | 1             | 1.00               |



|                   |               |                          |                   |
|-------------------|---------------|--------------------------|-------------------|
| CHANNEL BANDWIDTH | 20MHz / QPSK  | MODE                     | TX channel 132322 |
| FREQUENCY RANGE   | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH   |
| INPUT POWER       | AC 120V 60HZ  | TESTED BY                | Hanwen Xu         |

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,472.000       | -47.76          | -13.00          | 34.76           | 26.00           | V            | 0.9           | 2.00               |
| 4  | 5,208.000       | -43.28          | -13.00          | 30.28           | 31.87           | V            | 108.4         | 2.00               |

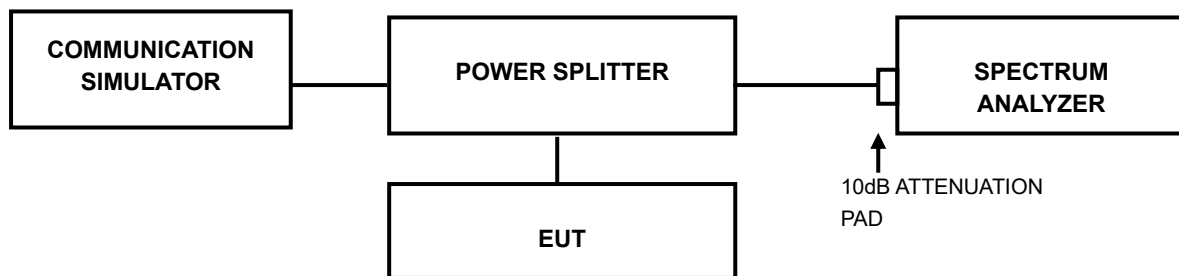


### 3.7 PEAK TO AVERAGE RATIO

#### 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%.

#### 3.7.4 TEST RESULTS

Please Refer to Appendix Of this test report.



## 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.

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

Lab Address:

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

Accredited Test Lab Cert 6613.01

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

**Suzhou EMC/RF Lab:**

Tel: +86 (0557) 368 1008



## **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.



## 6 Appendix

### LTE BAND 66(INCLUDING BAND 4)

#### PEAK-TO-AVERAGE RATIO(CCDF)

##### Test Result

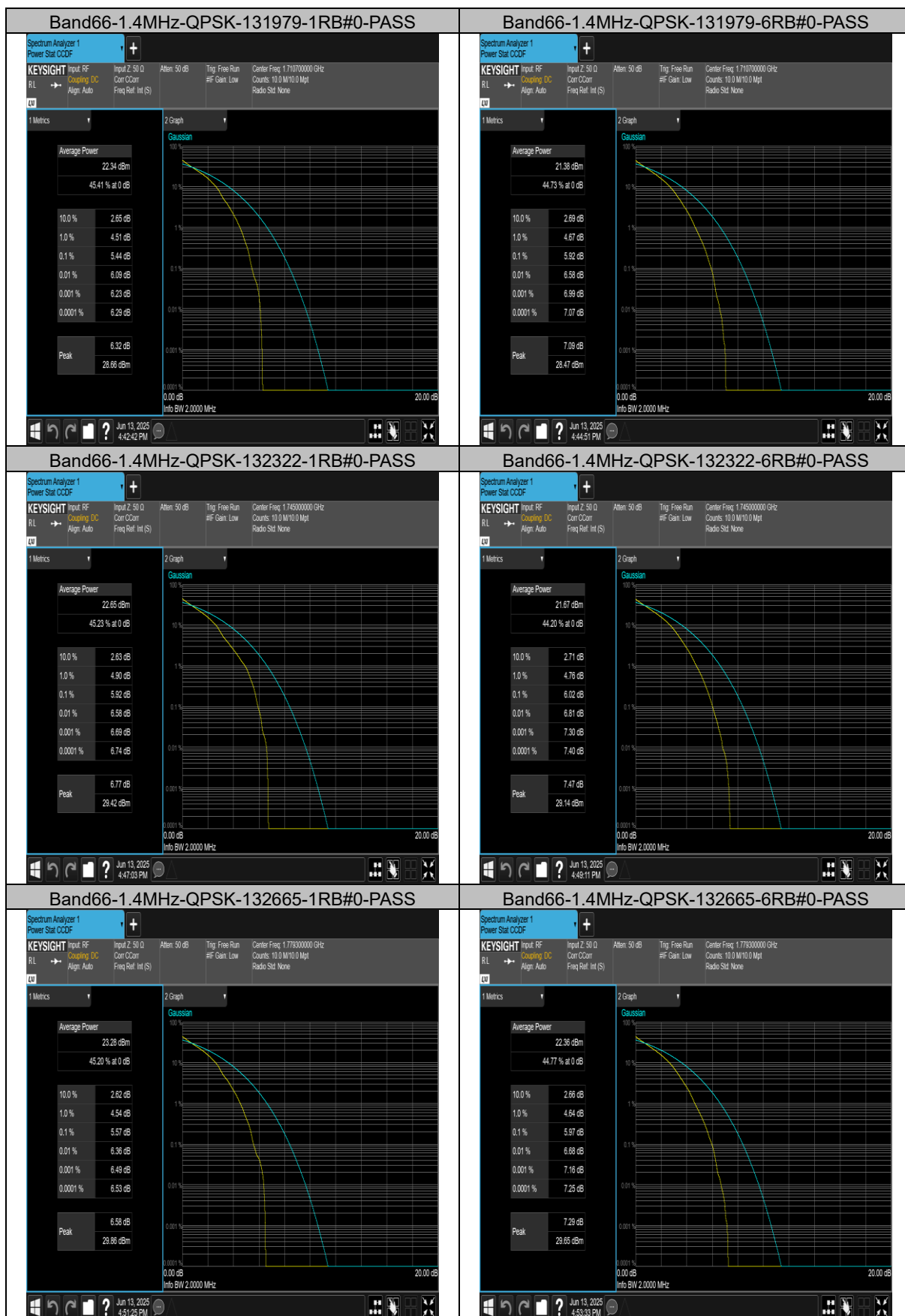
| Band   | Bandwidth | Modulation | Channel | RB Configuration | Result(dB) | Limit(dB) | Verdict |
|--------|-----------|------------|---------|------------------|------------|-----------|---------|
| Band66 | 1.4MHz    | QPSK       | 131979  | 1RB#0            | 5.44       | 13        | PASS    |
| Band66 | 1.4MHz    | QPSK       | 131979  | 6RB#0            | 5.92       | 13        | PASS    |
| Band66 | 1.4MHz    | QPSK       | 132322  | 1RB#0            | 5.92       | 13        | PASS    |
| Band66 | 1.4MHz    | QPSK       | 132322  | 6RB#0            | 6.02       | 13        | PASS    |
| Band66 | 1.4MHz    | QPSK       | 132665  | 1RB#0            | 5.57       | 13        | PASS    |
| Band66 | 1.4MHz    | QPSK       | 132665  | 6RB#0            | 5.97       | 13        | PASS    |
| Band66 | 1.4MHz    | 16QAM      | 131979  | 1RB#0            | 6.45       | 13        | PASS    |
| Band66 | 1.4MHz    | 16QAM      | 131979  | 6RB#0            | 6.71       | 13        | PASS    |
| Band66 | 1.4MHz    | 16QAM      | 132322  | 1RB#0            | 6.43       | 13        | PASS    |
| Band66 | 1.4MHz    | 16QAM      | 132322  | 6RB#0            | 6.88       | 13        | PASS    |
| Band66 | 1.4MHz    | 16QAM      | 132665  | 1RB#0            | 6.62       | 13        | PASS    |
| Band66 | 1.4MHz    | 16QAM      | 132665  | 6RB#0            | 6.74       | 13        | PASS    |
| Band66 | 3MHz      | QPSK       | 131987  | 1RB#0            | 5.74       | 13        | PASS    |
| Band66 | 3MHz      | QPSK       | 131987  | 15RB#0           | 5.79       | 13        | PASS    |
| Band66 | 3MHz      | QPSK       | 132322  | 1RB#0            | 5.94       | 13        | PASS    |
| Band66 | 3MHz      | QPSK       | 132322  | 15RB#0           | 6.06       | 13        | PASS    |
| Band66 | 3MHz      | QPSK       | 132657  | 1RB#0            | 5.64       | 13        | PASS    |
| Band66 | 3MHz      | QPSK       | 132657  | 15RB#0           | 5.90       | 13        | PASS    |
| Band66 | 3MHz      | 16QAM      | 131987  | 1RB#0            | 6.57       | 13        | PASS    |
| Band66 | 3MHz      | 16QAM      | 131987  | 15RB#0           | 6.54       | 13        | PASS    |
| Band66 | 3MHz      | 16QAM      | 132322  | 1RB#0            | 6.44       | 13        | PASS    |
| Band66 | 3MHz      | 16QAM      | 132322  | 15RB#0           | 6.81       | 13        | PASS    |
| Band66 | 3MHz      | 16QAM      | 132657  | 1RB#0            | 6.56       | 13        | PASS    |
| Band66 | 3MHz      | 16QAM      | 132657  | 15RB#0           | 6.67       | 13        | PASS    |
| Band66 | 5MHz      | QPSK       | 131997  | 1RB#0            | 5.40       | 13        | PASS    |
| Band66 | 5MHz      | QPSK       | 131997  | 25RB#0           | 5.87       | 13        | PASS    |
| Band66 | 5MHz      | QPSK       | 132322  | 1RB#0            | 5.76       | 13        | PASS    |
| Band66 | 5MHz      | QPSK       | 132322  | 25RB#0           | 5.94       | 13        | PASS    |
| Band66 | 5MHz      | QPSK       | 132647  | 1RB#0            | 5.37       | 13        | PASS    |
| Band66 | 5MHz      | QPSK       | 132647  | 25RB#0           | 5.91       | 13        | PASS    |
| Band66 | 5MHz      | 16QAM      | 131997  | 1RB#0            | 6.18       | 13        | PASS    |
| Band66 | 5MHz      | 16QAM      | 131997  | 25RB#0           | 6.49       | 13        | PASS    |
| Band66 | 5MHz      | 16QAM      | 132322  | 1RB#0            | 6.57       | 13        | PASS    |
| Band66 | 5MHz      | 16QAM      | 132322  | 25RB#0           | 6.54       | 13        | PASS    |
| Band66 | 5MHz      | 16QAM      | 132647  | 1RB#0            | 6.60       | 13        | PASS    |
| Band66 | 5MHz      | 16QAM      | 132647  | 25RB#0           | 6.67       | 13        | PASS    |
| Band66 | 10MHz     | QPSK       | 132022  | 1RB#0            | 5.48       | 13        | PASS    |
| Band66 | 10MHz     | QPSK       | 132022  | 50RB#0           | 5.80       | 13        | PASS    |
| Band66 | 10MHz     | QPSK       | 132322  | 1RB#0            | 5.85       | 13        | PASS    |
| Band66 | 10MHz     | QPSK       | 132322  | 50RB#0           | 5.89       | 13        | PASS    |
| Band66 | 10MHz     | QPSK       | 132622  | 1RB#0            | 5.37       | 13        | PASS    |
| Band66 | 10MHz     | QPSK       | 132622  | 50RB#0           | 5.83       | 13        | PASS    |
| Band66 | 10MHz     | 16QAM      | 132022  | 1RB#0            | 6.12       | 13        | PASS    |
| Band66 | 10MHz     | 16QAM      | 132022  | 27RB#0           | 6.55       | 13        | PASS    |



|        |       |       |        |         |      |    |      |
|--------|-------|-------|--------|---------|------|----|------|
| Band66 | 10MHz | 16QAM | 132322 | 1RB#0   | 6.52 | 13 | PASS |
| Band66 | 10MHz | 16QAM | 132322 | 27RB#0  | 6.63 | 13 | PASS |
| Band66 | 10MHz | 16QAM | 132622 | 1RB#0   | 6.34 | 13 | PASS |
| Band66 | 10MHz | 16QAM | 132622 | 27RB#0  | 6.57 | 13 | PASS |
| Band66 | 15MHz | QPSK  | 132047 | 1RB#0   | 5.51 | 13 | PASS |
| Band66 | 15MHz | QPSK  | 132047 | 75RB#0  | 5.32 | 13 | PASS |
| Band66 | 15MHz | QPSK  | 132322 | 1RB#0   | 5.85 | 13 | PASS |
| Band66 | 15MHz | QPSK  | 132322 | 75RB#0  | 5.58 | 13 | PASS |
| Band66 | 15MHz | QPSK  | 132597 | 1RB#0   | 5.16 | 13 | PASS |
| Band66 | 15MHz | QPSK  | 132597 | 75RB#0  | 5.45 | 13 | PASS |
| Band66 | 15MHz | 16QAM | 132047 | 1RB#0   | 6.09 | 13 | PASS |
| Band66 | 15MHz | 16QAM | 132047 | 27RB#0  | 6.21 | 13 | PASS |
| Band66 | 15MHz | 16QAM | 132322 | 1RB#0   | 6.88 | 13 | PASS |
| Band66 | 15MHz | 16QAM | 132322 | 27RB#0  | 6.45 | 13 | PASS |
| Band66 | 15MHz | 16QAM | 132597 | 1RB#0   | 6.10 | 13 | PASS |
| Band66 | 15MHz | 16QAM | 132597 | 27RB#0  | 6.17 | 13 | PASS |
| Band66 | 20MHz | QPSK  | 132072 | 1RB#0   | 5.45 | 13 | PASS |
| Band66 | 20MHz | QPSK  | 132072 | 100RB#0 | 5.53 | 13 | PASS |
| Band66 | 20MHz | QPSK  | 132322 | 1RB#0   | 5.41 | 13 | PASS |
| Band66 | 20MHz | QPSK  | 132322 | 100RB#0 | 5.87 | 13 | PASS |
| Band66 | 20MHz | QPSK  | 132572 | 1RB#0   | 5.14 | 13 | PASS |
| Band66 | 20MHz | QPSK  | 132572 | 100RB#0 | 5.66 | 13 | PASS |
| Band66 | 20MHz | 16QAM | 132072 | 1RB#0   | 5.99 | 13 | PASS |
| Band66 | 20MHz | 16QAM | 132072 | 27RB#0  | 6.39 | 13 | PASS |
| Band66 | 20MHz | 16QAM | 132322 | 1RB#0   | 6.23 | 13 | PASS |
| Band66 | 20MHz | 16QAM | 132322 | 27RB#0  | 6.65 | 13 | PASS |
| Band66 | 20MHz | 16QAM | 132572 | 1RB#0   | 5.96 | 13 | PASS |
| Band66 | 20MHz | 16QAM | 132572 | 27RB#0  | 6.32 | 13 | PASS |



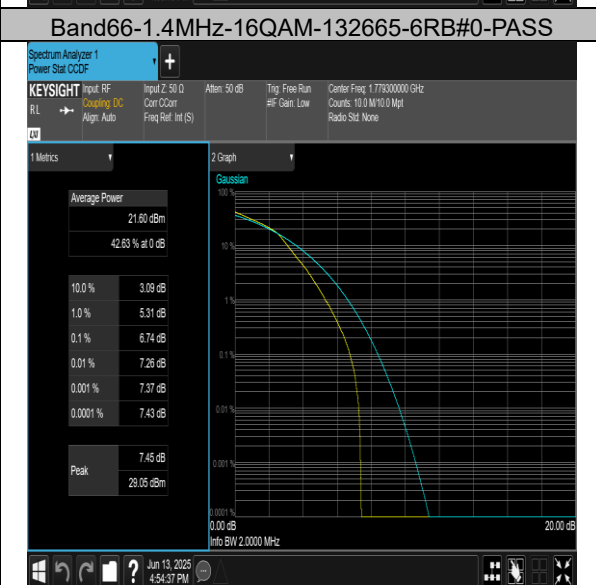
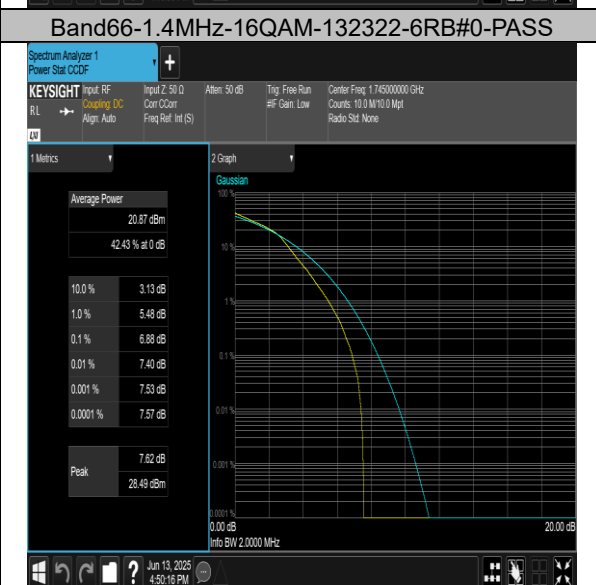
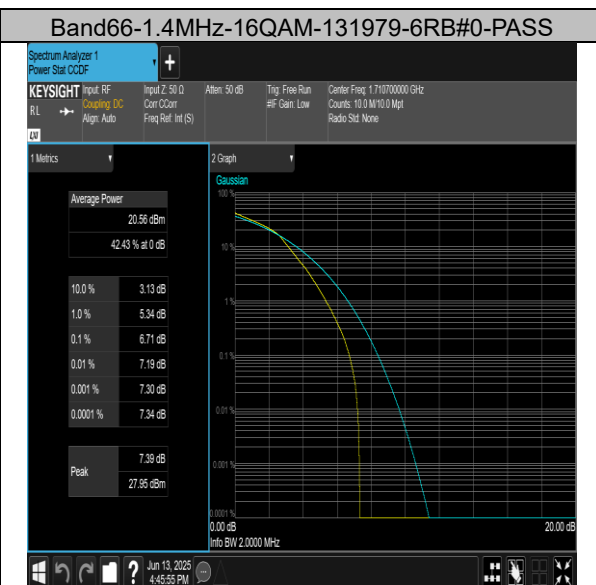
## Test Graphs



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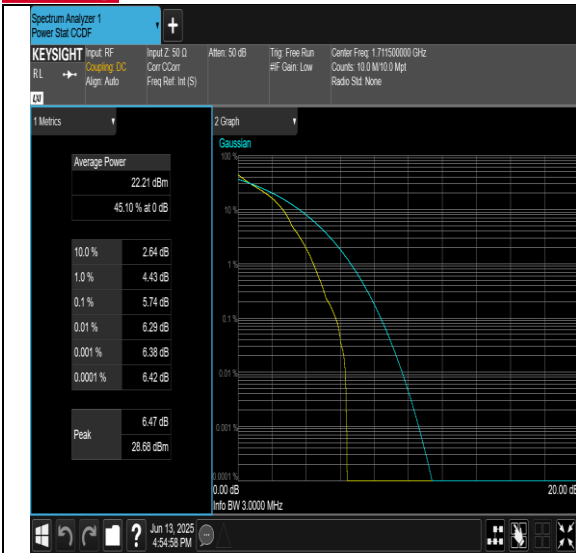
Tower N, Innovation Center, 88 Zuyi Road, High-tech  
District, Suzhou City, Anhui Province, China

Tel: +86 (0557) 368 1008

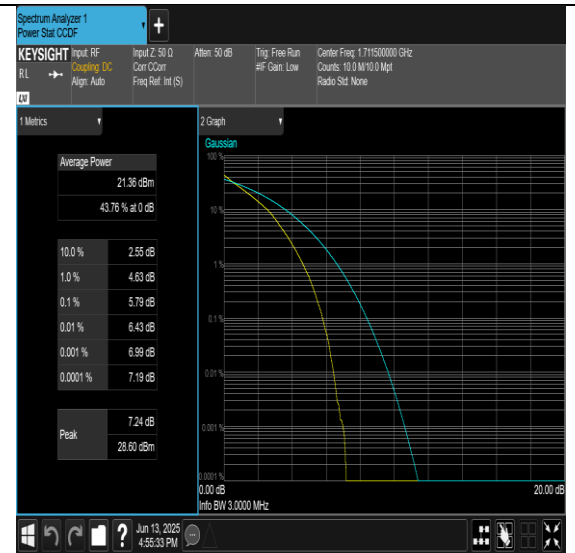




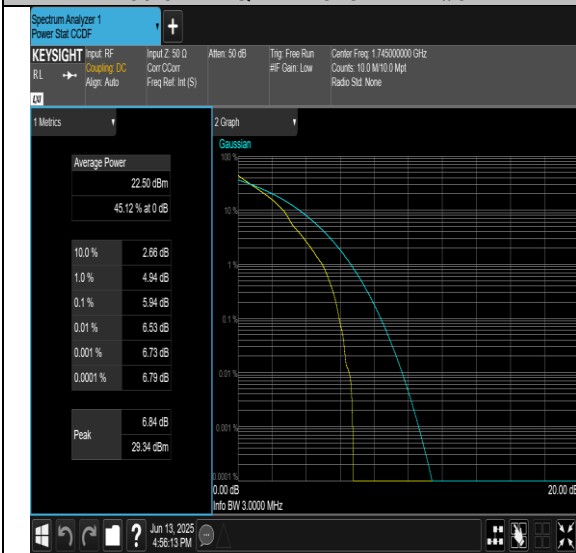
**BUREAU VERITAS** Test Report No.: PBJ-NQN2504110217RF04



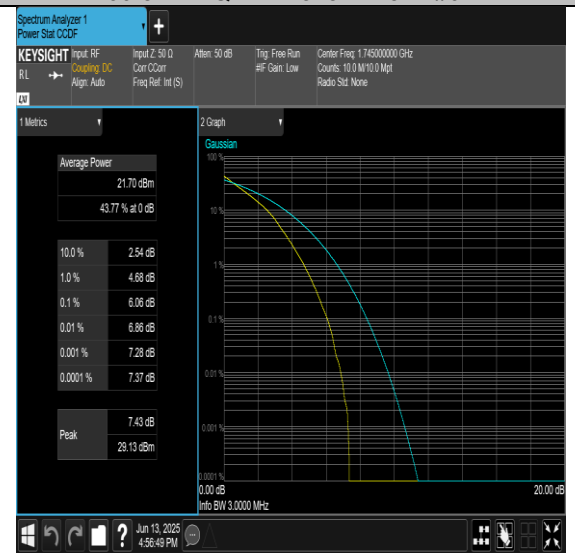
Band66-3MHz-QPSK-132322-1RB#0-PASS



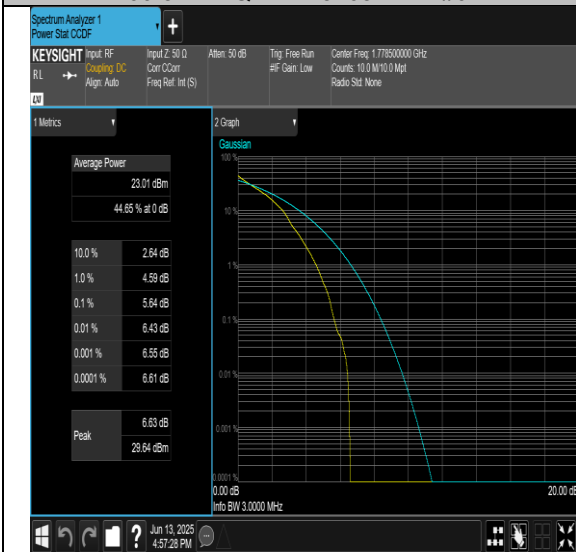
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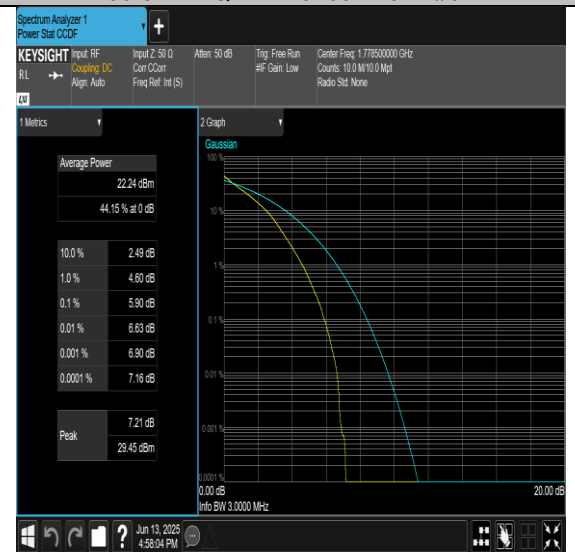
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Band66-3MHz-QPSK-132657-15RB#0-PASS



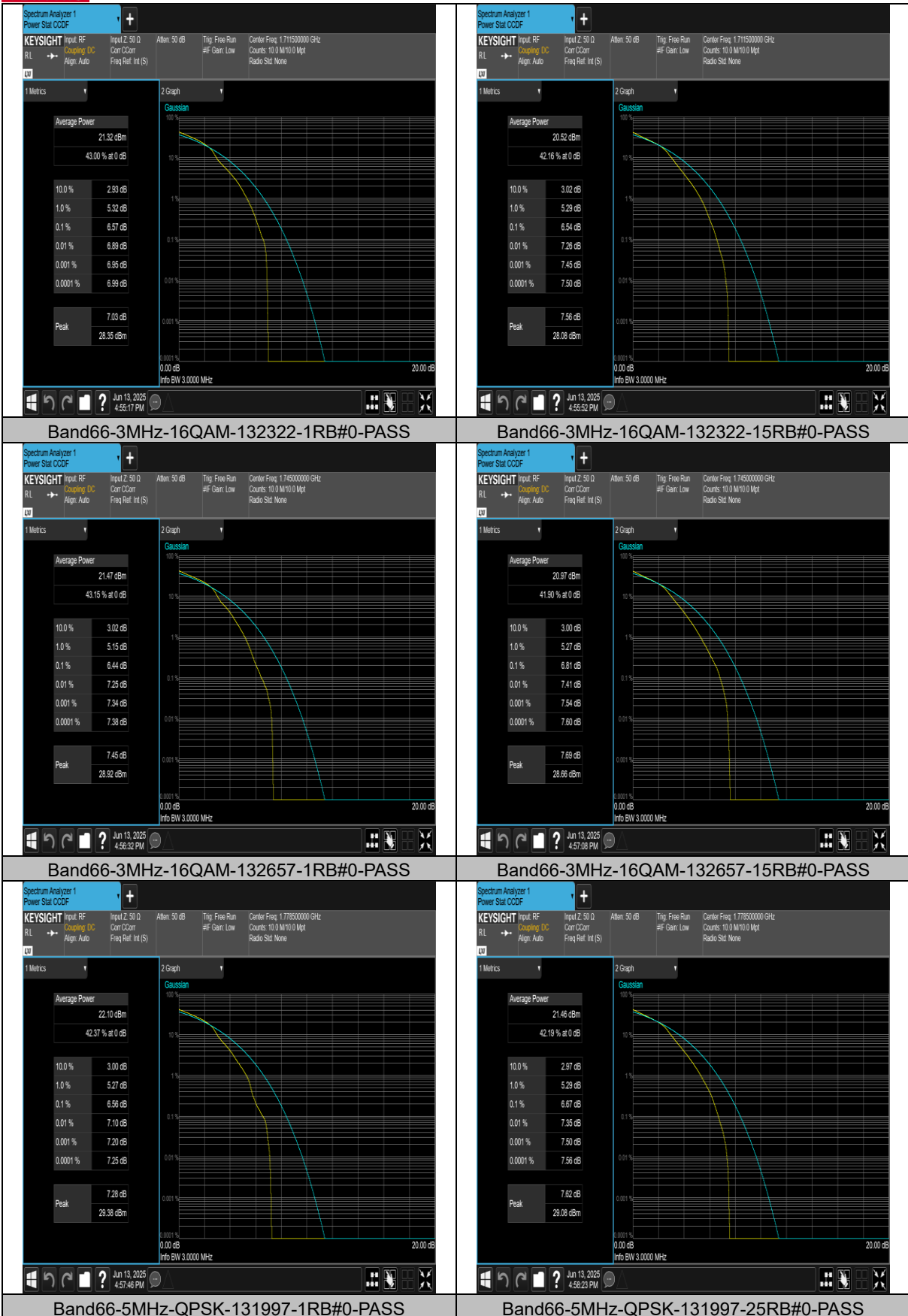
Band66-3MHz-16QAM-131987-1RB#0-PASS



Band66-3MHz-16QAM-131987-15RB#0-PASS

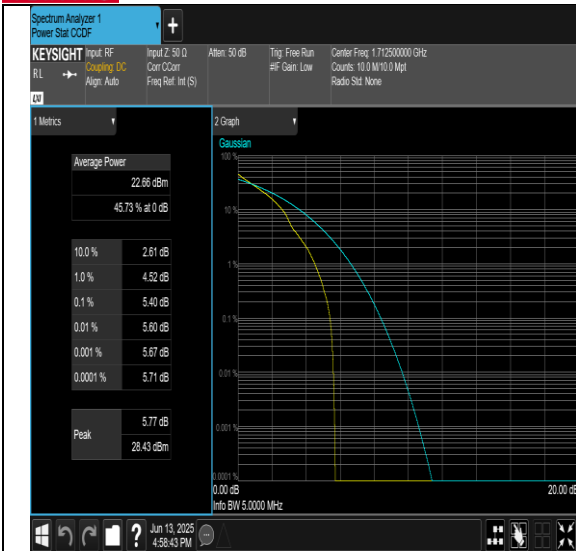


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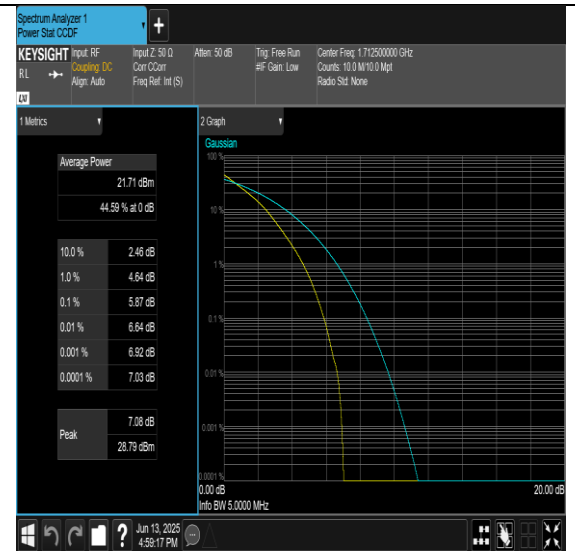




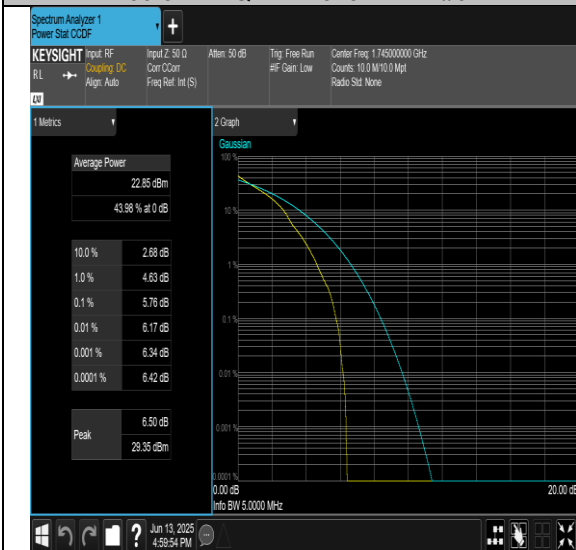
**BUREAU VERITAS** Test Report No.: PBJ-NQN2504110217RF04



Band66-5MHz-QPSK-132322-1RB#0-PASS



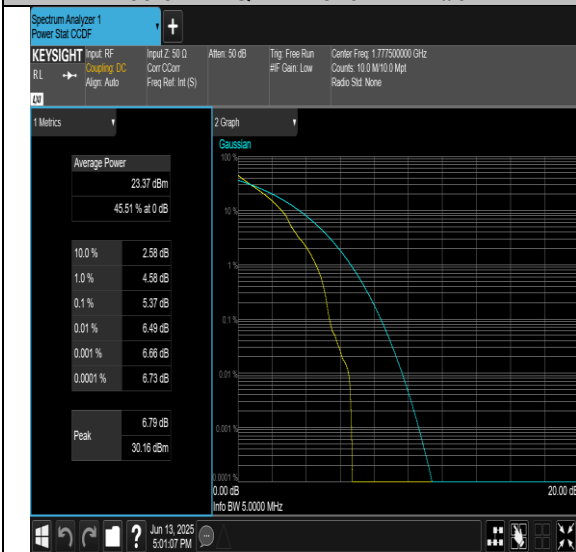
Band66-5MHz-QPSK-132322-25RB#0-PASS



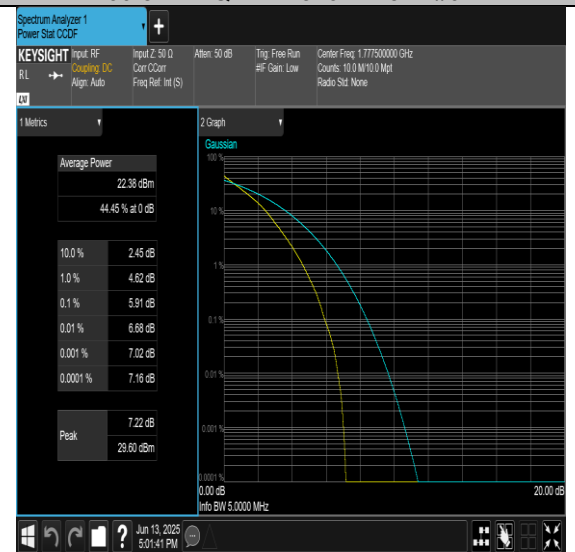
Band66-5MHz-QPSK-132647-1RB#0-PASS



Band66-5MHz-QPSK-132647-25RB#0-PASS



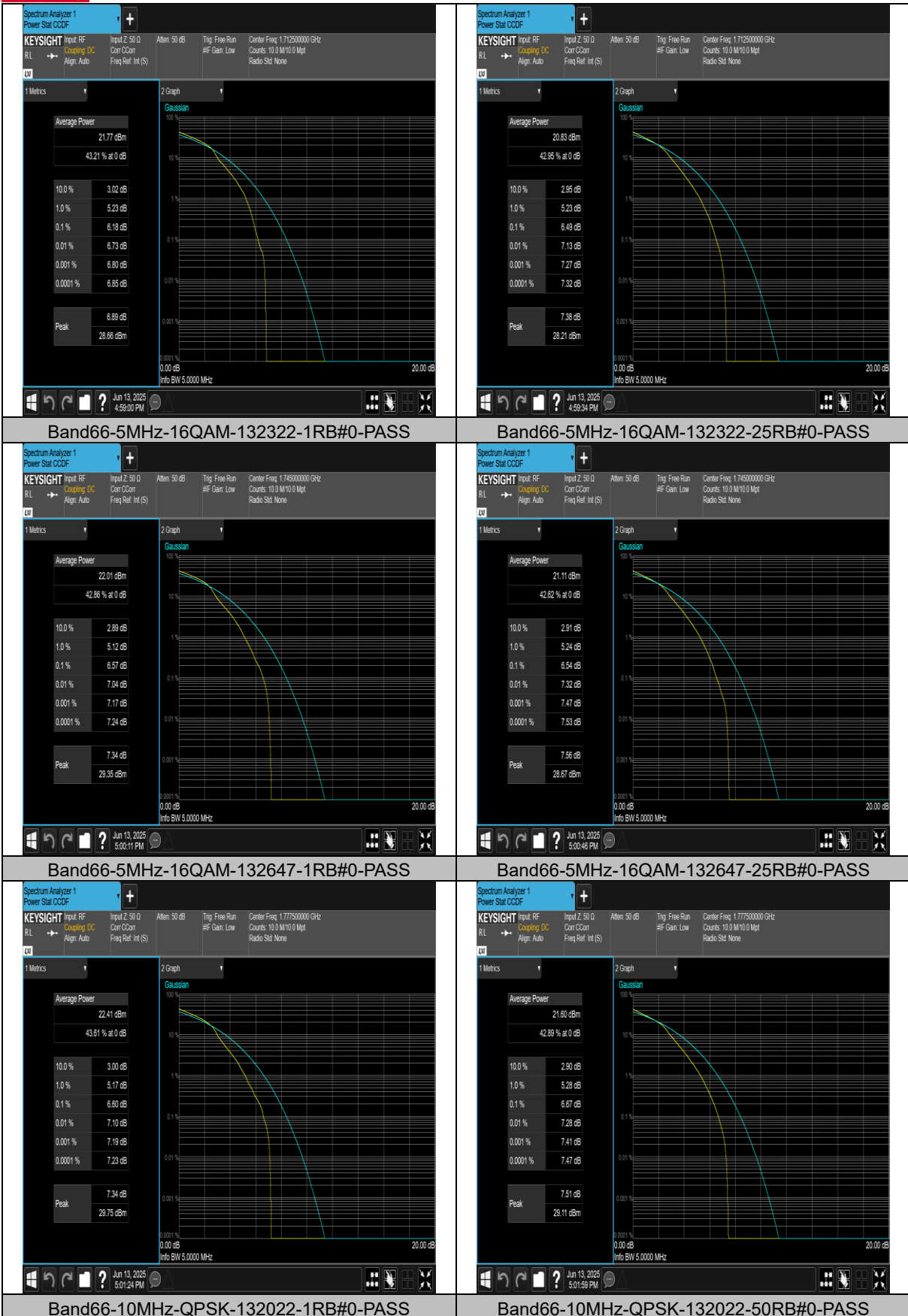
Band66-5MHz-16QAM-131997-1RB#0-PASS



Band66-5MHz-16QAM-131997-25RB#0-PASS



**BUREAU VERITAS** Test Report No.: PBJ-NQN2504110217RF04





**BUREAU VERITAS** Test Report No.: PBJ-NQN2504110217RF04

