



BUREAU  
VERITAS

Test Report No.: PSU-NQN2406210109RF02



Certificate #6613.01

# FCC TEST REPORT (PART 24)

|            |  |
|------------|--|
| Applicant: | Power Idea Technology (Shenzhen) Co., Ltd.   |
| Address:   | 4th Floor, A Section, Languang Science&technology Building, No.7 Xinxi RD, Hi-Tech Industrial Park North, Nanshan District, ShenZhen, P.R.C. |

|                           |  |
|---------------------------|--|
| Manufacturer or Supplier: | Power Idea Technology (Shenzhen) Co., Ltd.   |
| Address:                  | 4th Floor, A Section, Languang Science&technology Building, No.7 Xinxi RD, Hi-Tech Industrial Park North, Nanshan District, ShenZhen, P.R.C. |
| Product:                  | Smart Phone  |
| Brand Name:               | RugGear  |
| Model Name:               | PSM05G   |
| Marketing name :          | RG880i   |
| FCC ID:                   | ZLE-PSM05G   |
| Date of tests:            | Aug. 28, 2024 ~ Sep.27, 2024   |

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

- FCC PART 24, Subpart E  FCC PART 2  
 ANSI/TIA/EIA-603-D  ANSI/TIA/EIA-603-E  ANSI C63.26-2015

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: Sep.27, 2024                                    | Date: Sep.27, 2024                                   |

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Test Report No.: PSU-NQN2406210109RF02

## RELEASE CONTROL RECORD

| ISSUE NO.             | REASON FOR CHANGE | DATE ISSUED  |
|-----------------------|-------------------|--------------|
| PSU-NQN2406210109RF02 | Original release  | Sep.27, 2024 |



# 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 24 & Part 2 |                                     |            |           |
|--|-------------------------------------|------------|-----------|
| STANDARD SECTION                       | TEST TYPE                           | RESULT     | Test lab* |
| §2.1046                                | Coducted Output Power               | Compliance | A         |
| §24.232(c)                             | Equivalent Isotropic Radiated Power | Compliance | A         |
| §2.1055<br>§24.235                     | Frequency Stability                 | Compliance | A/B       |
| §2.1049<br>§24.238(b)                  | Occupied Bandwidth                  | Compliance | A/B       |
| §24.232(d)                             | Peak to average ratio*              | Compliance | A/B       |
| §2.1051<br>§24.238(a)(b)               | Band Edge Measurements              | Compliance | A/B       |
| §2.1051<br>§24.238(a)(b)               | Conducted Spurious Emissions        | Compliance | A/B       |
| §2.1053<br>§24.238(a)(b)               | Radiated Spurious Emissions         | Compliance | A/B       |

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

**NOTE:** The maximum RF output power level is 1xRTT RC3 SO55 mode for CDMA2000 BC1, so only 1xRTT mode was used for all tests.

### \*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

**Accredited Test Lab Cert 6613.01**

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

**Lab B:**

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

**Lab Address:**

Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District

Shenzhen, Guangdong, People's Republic of China

**Accredited Test Lab Cert 3939.01**

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

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

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

Tel: +86 (0557) 368 1008

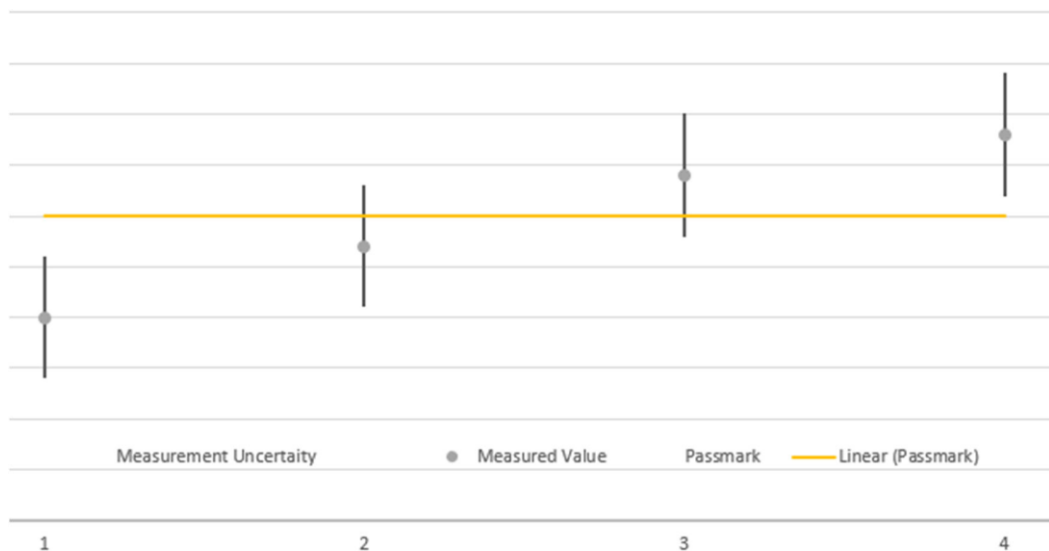


### 1.1 MEASUREMENT UNCERTAINTY

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

| MEASUREMENT                                      | UNCERTAINTY |
|--|-------------|
| Frequency Stability                              | ± 76.97Hz   |
| Radiated emissions (9KHz~30MHz)                  | ±2.68dB     |
| Radiated emissions & Radiated Power (30MHz~1GHz) | ±4.98dB     |
| Radiated emissions & Radiated Power (1GHz ~6GHz) | ±4.70dB     |
| Radiated emissions (6GHz ~18GHz)                 | ±4.60dB     |
| Radiated emissions (18GHz ~40GHz)                | ±4.12dB     |
| Conducted emissions                              | ±4.01dB     |
| Occupied Channel Bandwidth                       | ±43.58KHz   |
| Conducted Output power                           | ±2.06dB     |
| Band Edge Measurements                           | ±4.70dB     |
| Peak to average ratio                            | ±0.76dB     |

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**

Lab A :

| Equipment                          | Manufacturer                 | Model No.        | Serial No.              | Last Cal. | Next Cal. |
|------------------------------------|------------------------------|------------------|-------------------------|-----------|-----------|
| Pre-Amplifier                      | R&S                          | SCU18F1          | 100815                  | Aug.30,22 | Aug.29,24 |
| Pre-Amplifier                      | R&S                          | SCU18F1          | 100815                  | Aug.29,24 | Aug.28,26 |
| Pre-Amplifier                      | R&S                          | SCU08F1          | 101028                  | Sep.16,22 | Sep.15,24 |
| Pre-Amplifier                      | R&S                          | SCU08F1          | 101028                  | Sep.15,24 | Sep.14,26 |
| 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-E MC-01 Chamber | Nov.25,22 | Nov.24,25 |
| 3m Semi-anechoic Chamber           | TDK                          | 9m*6m*6m         | HRSW-SZ-E MC-02 Chamber | 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                    | Dec.26,23 | Dec.25,25 |
| Horn Antenna                       | ETS-LINDGREN                 | 3117             | 227836                  | Aug.21,24 | Aug.20,26 |
| 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                   | Aug.21,24 | Aug.20,26 |
| Loop Antenna                       | SCHWARZ                      | HFH2-Z2/Z2E      | 100976                  | Feb.22,24 | Feb.21,26 |
| WIDEBANDRADIO COMMUNICATION TESTER | R&S                          | CMW500           | 169399                  | Jun.19,24 | Jun.18,26 |
| Test Software                      | EMC32                        | EMC32            | N/A                     | N/A       | N/A       |
| 6DB attenuator                     | Tonscend Technology Co., Ltd | N/A              | 23062787                | N/A       | N/A       |
| Test Software                      | ELEKTRA                      | ELEKTRA4.32      | N/A                     | N/A       | N/A       |
| Open Switch and Control Unit       | R&S                          | OSP220           | 101964                  | Oct.01,22 | Sep.30,24 |
| DC Source                          | HYELEC                       | HY3010B          | 551016                  | Aug.31,22 | Aug.30,24 |
| DC Source                          | HYELEC                       | HY3010B          | 551016                  | Aug.30,24 | Aug.29,26 |
| Hygrothermograph                   | DELI                         | 20210528         | SZ014                   | Sep.06,22 | Sep.05,24 |
| Hygrothermograph                   | DELI                         | 20210528         | SZ014                   | Sep.05,24 | Sep.04,26 |
| 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                          | W12.14           | N/A                     | Apr.27,24 | Apr.26,25 |
| CABLE                              | R&S                          | J12J103539-00-1  | SEP-03-20-069           | Apr.27,24 | Apr.26,25 |





|                     |        |                 |                |           |           |
|---------------------|--------|-----------------|----------------|-----------|-----------|
| CABLE               | R&S    | J12J103539-00-1 | SEP-03-20-070  | Apr.27,24 | Apr.26,25 |
| Temperature Chamber | votsch | VT4002          | 58566078100050 | May.30,24 | May.29,26 |

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

Lab B :

| Equipment                                   | Manufacturer      | Model No.                           | Serial No.                          | Last Cal.  | Next Cal.  |
|---|-------------------|-------------------------------------|-------------------------------------|------------|------------|
| MXE EMI Receiver                            | KEYSIGHT          | N9038A-544                          | MY54450026                          | Mar. 27,24 | Mar. 26,25 |
| EXA Signal Analyzer                         | KEYSIGHT          | N9010A-544                          | MY54510355                          | May.09,24  | May.08,25  |
| Loop Antenna                                | Schwarzbeck       | FMZB 1519B                          | 00173                               | Sep.02,23  | Sep.01,24  |
| Loop Antenna                                | Schwarzbeck       | FMZB 1519B                          | 00173                               | Sep.01,24  | Aug.30,25  |
| Bilog Antenna                               | ETS-LINDGR<br>EN  | 3143B                               | 00161965                            | Feb. 17,24 | Feb. 16,25 |
| Horn Antenna                                | ETS-LINDGR<br>EN  | 3117                                | 00168692                            | Feb. 17,24 | Feb. 16,25 |
| Horn Antenna<br>(18GHz-40GHz)               | N/A               | QWH-SL-18-40-<br>K-SG/QMS-0036<br>1 | 15433                               | Sep.03, 23 | Sep.02, 24 |
| Horn Antenna<br>(18GHz-40GHz)               | N/A               | QWH-SL-18-40-<br>K-SG/QMS-0036<br>1 | 15433                               | Sep.02, 24 | Sep.01, 25 |
| Radio<br>Communication<br>Analyzer          | ANRITSU           | MT8820C                             | 6201465426                          | Feb. 13,24 | Feb. 12,25 |
| Signal Pre-Amplifier                        | EMSI              | EMC 9135                            | 980249                              | May. 05,24 | May. 04,25 |
| Signal Pre-Amplifier                        | EMSI              | EMC 012645B                         | 980257                              | May.09,24  | May.08,25  |
| Signal Pre-Amplifier                        | EMSI              | EMC 184045B                         | 980259                              | Feb.16,24  | Feb.15,25  |
| 3m<br>Semi-anechoic<br>Chamber              | ETS-LINDGR<br>EN  | 9m*6m*6m                            | Euroshieldpn-<br>CT0001143-12<br>16 | Nov. 14,23 | Nov. 13,26 |
| Test Software                               | E3                | V 9.160323                          | N/A                                 | N/A        | N/A        |
| Test Software                               | JS1120            | 3.1.36                              | N/A                                 | N/A        | N/A        |
| 10dB Attenuator                             | JFW/USA           | 50HF-010-SMA                        | 50HF-010-SM<br>A                    | May. 05,24 | May. 04,26 |
| Power Meter                                 | Anritsu           | ML2495A                             | 1506002                             | Feb. 13,24 | Feb. 12,25 |
| Power Sensor                                | Anritsu           | MA2411B                             | 1339352                             | Feb. 13,24 | Feb. 12,25 |
| Temperature<br>Chamber                      | ESPEC             | SH-242                              | 93000855                            | May. 05,24 | May. 04,25 |
| MXG<br>Analog Microwave<br>Signal Generator | KEYSIGHT          | N5183A                              | MY50143024                          | Feb. 13,24 | Feb. 12,25 |
| Base station R&S<br>CMW500                  | Rohde&Schw<br>arz | CMW500                              | 153085                              | May.09,24  | May.08,25  |
| DC Source                                   | Kikusui/JP        | PMX18-5A                            | N/A                                 | Aug. 11,23 | Aug. 10,24 |
| DC Source                                   | Kikusui/JP        | PMX18-5A                            | N/A                                 | Aug. 10,24 | Aug. 09,26 |



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VERITAS**

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- NOTE:**
1. The calibration interval of the above test instruments is 12/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
  2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
  3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
  4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.



## 2 GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

|                             |   |                         |
|-----------------------------|---|-------------------------|
| <b>PRODUCT*</b>             | Smart Phone   |                         |
| <b>BRAND NAME*</b>          | RugGear   |                         |
| <b>MODEL NAME*</b>          | PSM05G  |                         |
| <b>MARKETING NAME*</b>      | RG880i  |                         |
| <b>NOMINAL VOLTAGE*</b>     | 5.0Vdc/ 9.0Vdc/ 12.0Vdc(Adapter)<br>3.85Vdc (Battery)   |                         |
| <b>MODULATION TYPE*</b>     | <b>GSM/GPRS:</b> GMSK<br><b>EDGE:</b> 8PSK<br><b>CDMA2000 BC1:</b> 1xRTT: BPSK, QPSK<br><b>CDMA2000 BC1:</b> 1xEV-DO: 8PSK<br><b>WCDMA:</b> BPSK, QPSK<br><b>LTE Band 2:</b> QPSK, 16QAM, 64QAM |                         |
| <b>FREQUENCY RANGE</b>      | <b>GSM/ EDGE</b>  | 1850.2MHz ~ 1909.8MHz   |
|                             | <b>CDMA 2000 BC1</b>  | 1851.25MHz ~ 1908.75MHz |
|                             | <b>WCDMA</b>  | 1852.4MHz ~ 1907.6MHz   |
|                             | <b>LTE Band 2<br/>Channel Bandwidth: 1.4MHz</b>   | 1850.7MHz ~ 1909.3MHz   |
|                             | <b>LTE Band 2<br/>Channel Bandwidth: 3MHz</b>   | 1851.5MHz ~ 1908.5MHz   |
|                             | <b>LTE Band 2<br/>Channel Bandwidth: 5MHz</b>   | 1852.5MHz ~ 1907.5MHz   |
|                             | <b>LTE Band 2<br/>Channel Bandwidth: 10MHz</b>  | 1855.0MHz ~ 1905.0MHz   |
|                             | <b>LTE Band 2<br/>Channel Bandwidth: 15MHz</b>  | 1857.5MHz ~ 1902.5MHz   |
|                             | <b>LTE Band 2<br/>Channel Bandwidth: 20MHz</b>  | 1860.0MHz ~ 1900.0MHz   |
|                             | <b>MAX. EIRP POWER</b>  | <b>GSM</b>              |
| <b>EDGE</b>                 |   | 293.09mW                |
| <b>CDMA2000 BC1 1xRTT</b>   |   | 168.66mW                |
| <b>CDMA2000 BC1 1xEV-DO</b> |   | 166.34mW                |
| <b>WCDMA</b>                |   | 180.72mW                |



|                            |  |                |  |
|----------------------------|--|----------------|--|
| <b>MAX. EIRP POWER</b>     | <b>LTE Band 2<br/>Channel Bandwidth: 1.4MHz</b>                          | 167.11mW       |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 3MHz</b>                            | 161.81mW       |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 5MHz</b>                            | 160.69mW       |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 10MHz</b>                           | 160.69mW       |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 15MHz</b>                           | 162.93mW       |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 20MHz</b>                           | 164.44mW       |  |
| <b>EMISSION DESIGNATOR</b> | <b>GSM</b>   | 246KGXW        |  |
|                            | <b>EDGE</b>  | 246KG7W        |  |
|                            | <b>CDMA2000 BC1</b>  | 1M29F9W        |  |
|                            | <b>WCDMA</b>   | 4M14F9W        |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 1.4MHz</b>                          | QPSK: 1M09G7D  |  |
|                            |  | 16QAM: 1M09W7D |  |
|                            |  | 64QAM: 1M09W7D |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 3MHz</b>                            | QPSK: 2M69G7D  |  |
|                            |  | 16QAM: 2M69W7D |  |
|                            |  | 64QAM: 2M69W7D |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 5MHz</b>                            | QPSK: 4M49G7D  |  |
|                            |  | 16QAM: 4M49W7D |  |
|                            |  | 64QAM: 4M48W7D |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 10MHz</b>                           | QPSK: 8M95G7D  |  |
|                            |  | 16QAM: 8M95W7D |  |
|                            |  | 64QAM: 8M94W7D |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 15MHz</b>                           | QPSK: 13M5G7D  |  |
|                            |  | 16QAM: 13M4W7D |  |
|                            |  | 64QAM: 13M5W7D |  |
|                            | <b>LTE Band 2<br/>Channel Bandwidth: 20MHz</b>                           | QPSK: 17M9G7D  |  |
|                            |  | 16QAM: 17M9W7D |  |
| 64QAM: 17M9W7D             |  |                |  |
| <b>ANTENNA TYPE*</b>       | PIFA Antenna with -0.6dBi gain for GSM1900/ CDMA2000 BC1/WCDMA II/LTE B2 |                |  |
| <b>HW VERSION*</b>         | V02  |                |  |
| <b>SW VERSION*</b>         | RG880i_EAA_00.00_1   |                |  |



|                             |   |
|-----------------------------|---|
| <b>I/O PORTS*</b>           | Refer to user’s manual  |
| <b>CABLE SUPPLIED*</b>      | USB cable: non-shielded cable, with w/o ferrite core, 1.0 meter |
| <b>EXTREME TEMPERATURE*</b> | -10°C-55°C  |
| <b>EXTREME VOLTAGE*</b>     | 3.6V – 4.4V   |

**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 two receivers.

| <b>MODULATION MODE</b> | <b>TX FUNCTION</b> |
|------------------------|--------------------|
| <b>GSM/GPRS/EDGE</b>   | 1TX                |
| <b>CDMA 2000 BC1</b>   | 1TX                |
| <b>WCDMA</b>           | 1TX                |
| <b>LTE</b>             | 1TX                |

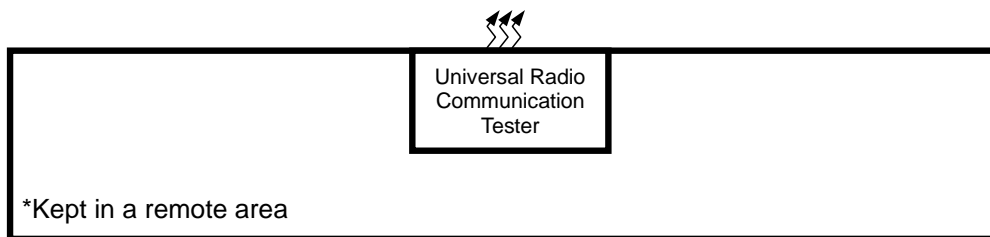
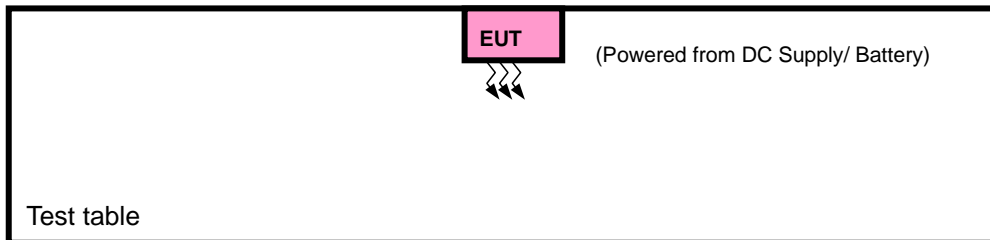
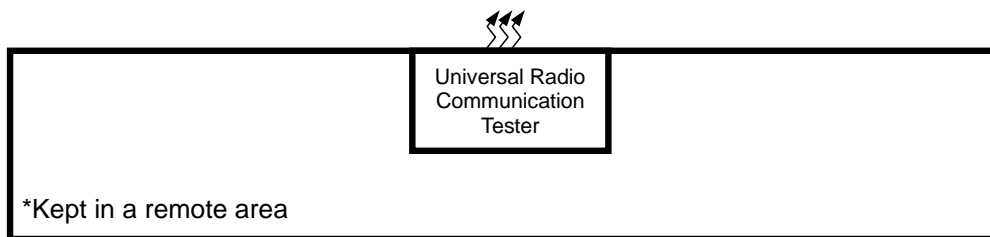
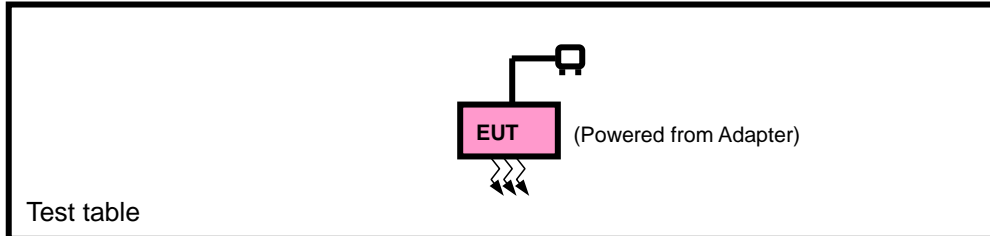
- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
- List of Accessory:**

| <b>ACCESSORIES</b> | <b>BRAND</b> | <b>MANUFACTURER</b>               | <b>MODEL</b>    | <b>SPECIFICATION</b>   |
|--------------------|--------------|-----------------------------------|-----------------|--|
| CPU                | QUALCOMM     | N/A                               | SM6225          | N/A  |
| eMMC 1 (=ROM 1)    | SAMSUNG      | N/A                               | KM2L9001CM-B518 | N/A  |
| eMMC 2 (=ROM 2)    | Hynix        | N/A                               | H9QT0GECN6X145R | N/A  |
| RAM 1              | N/A          | N/A                               | N/A             | N/A  |
| RAM 2              | N/A          | N/A                               | N/A             | N/A  |
| BT/WLAN Module     | N/A          | N/A                               | N/A             | N/A  |
| NFC chipset        | NXP          | N/A                               | N/A             | N/A  |
| Battery            | N/A          | N/A                               | BL450AGP        | Power Rating: 4.4V 4500mAh   |
| Adapter            | N/A          | Huizhou Juwei Electronics Co.,Ltd | FG18AQC3.0UU    | I/P: 100-240Vac, 50/60Hz, 0.5A, O/P:5.0V 3.0A or 9.0V 2.0A or 12.0V 1.5A |
| USB Cable          | N/A          | N/A                               | N/A             | N/A  |



## 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   | N/A     | N/A   | N/A       | N/A        | N/A    |

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

### 2.4 TEST ITEM AND TEST CONFIGURATION

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

| EUT CONFIGURE MODE | DESCRIPTION   |
|--------------------|---|
| A                  | EUT + Adapter+ USB Cable with GSM or CDMA2000 or WCDMA or LTE link  |
| B                  | EUT + Battery / DC Supply with GSM or CDMA2000 or WCDMA or LTE link |

#### GSM MODE

| EUT CONFIGURE MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL | MODE     |
|--------------------|-----------------------|-------------------|----------------|----------|
| A                  | EIRP                  | 512 to 810        | 512, 661, 810  | GSM,EDGE |
| B                  | FREQUENCY STABILITY   | 512 to 810        | 512, 661, 810  | GSM,EDGE |
| A                  | OCCUPIED BANDWIDTH    | 512 to 810        | 512, 661, 810  | GSM,EDGE |
| A                  | PEAK TO AVERAGE RATIO | 512 to 810        | 512, 661, 810  | GSM,EDGE |
| A                  | BAND EDGE             | 512 to 810        | 512, 810       | GSM,EDGE |
| A                  | CONDCUDED EMISSION    | 512 to 810        | 512, 661, 810  | GSM,EDGE |
| A                  | RADIATED EMISSION     | 512 to 810        | 512, 661, 810  | GSM,EDGE |



### CDMA2000 BC1

| EUT CONFIGURE MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL | MODE |
|--------------------|-----------------------|-------------------|----------------|------|
| A                  | ERP                   | 25 to 1175        | 25, 600, 1175  | CDMA |
| B                  | FREQUENCY STABILITY   | 25 to 1175        | 25, 600, 1175  | CDMA |
| A                  | OCCUPIED BANDWIDTH    | 25 to 1175        | 25, 600, 1175  | CDMA |
| A                  | BAND EDGE             | 25 to 1175        | 25, 1175       | CDMA |
| A                  | CONDCUDED EMISSION    | 25 to 1175        | 25, 600, 1175  | CDMA |
| A                  | RADIATED EMISSION     | 25 to 1175        | 25, 600, 1175  | CDMA |
| A                  | PEAK TO AVERAGE RATIO | 25 to 1175        | 25, 600, 1175  | CDMA |

### WCDMA

| EUT CONFIGURE MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL   | MODE  |
|--------------------|-----------------------|-------------------|------------------|-------|
| A                  | EIRP                  | 9262 to 9538      | 9262, 9400, 9538 | WCDMA |
| B                  | FREQUENCY STABILITY   | 9262 to 9538      | 9262, 9400, 9538 | WCDMA |
| A                  | OCCUPIED BANDWIDTH    | 9262 to 9538      | 9262, 9400, 9538 | WCDMA |
| A                  | PEAK TO AVERAGE RATIO | 9262 to 9538      | 9262, 9400, 9538 | WCDMA |
| A                  | BAND EDGE             | 9262 to 9538      | 9262, 9538       | WCDMA |
| A                  | CONDCUDED EMISSION    | 9262 to 9538      | 9262, 9400, 9538 | WCDMA |
| A                  | RADIATED EMISSION     | 9262 to 9538      | 9262, 9400, 9538 | WCDMA |





**LTE BAND 2 MODE**

| EUT CONFIGURE MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL      | CHANNEL BANDWIDTH | MODULATION       | MODE   |
|--------------------|-----------------------|-------------------|---------------------|-------------------|------------------|--|
| A                  | EIRP                  | 18607 to 19193    | 18607, 18900, 19193 | 1.4MHz            | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 18615 to 19185    | 18615, 18900, 19185 | 3MHz              | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 18625 to 19175    | 18625, 18900, 19175 | 5MHz              | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 18650 to 19150    | 18650, 18900, 19150 | 10MHz             | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 18675 to 19125    | 18675, 18900, 19125 | 15MHz             | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset                           |
|                    |                       | 18700 to 19100    | 18700, 18900, 19100 | 20MHz             | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset                           |
| B                  | FREQUENCY STABILITY   | 18700 to 19100    | 18700, 18900, 19100 | 20MHz             | QPSK,16QAM,64QAM | Full RB / 0 RB Offset                        |
| A                  | OCCUPIED BANDWIDTH    | 18607 to 19193    | 18607, 18900, 19193 | 1.4MHz            | QPSK,16QAM,64QAM | Full RB / 0 RB Offset                        |
|                    |                       | 18615 to 19185    | 18615, 18900, 19185 | 3MHz              | QPSK,16QAM,64QAM | Full RB / 0 RB Offset                        |
|                    |                       | 18625 to 19175    | 18625, 18900, 19175 | 5MHz              | QPSK,16QAM,64QAM | Full RB / 0 RB Offset                        |
|                    |                       | 18650 to 19150    | 18650, 18900, 19150 | 10MHz             | QPSK,16QAM,64QAM | Full RB / 0 RB Offset                        |
|                    |                       | 18675 to 19125    | 18675, 18900, 19125 | 15MHz             | QPSK,16QAM,64QAM | Full RB / 0 RB Offset                        |
|                    |                       | 18700 to 19100    | 18700, 18900, 19100 | 20MHz             | QPSK,16QAM,64QAM | Full RB / 0 RB Offset                        |
| A                  | PEAK TO AVERAGE RATIO | 18607 to 19193    | 18607, 18900, 19193 | 1.4MHz            | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       | 18615 to 19185    | 18615, 18900, 19185 | 3MHz              | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       | 18625 to 19175    | 18625, 18900, 19175 | 5MHz              | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       | 18650 to 19150    | 18650, 18900, 19150 | 10MHz             | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       | 18675 to 19125    | 18675, 18900, 19125 | 15MHz             | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       | 18700 to 19100    | 18700, 18900, 19100 | 20MHz             | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
| A                  | BAND EDGE             | 18607 to 19193    | 18607               | 1.4MHz            | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       |                   | 19193               | 1.4MHz            | QPSK,16QAM,64QAM | 1 RB / 5 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       | 18615 to 19185    | 18615               | 3MHz              | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       |                   | 19185               | 3MHz              | QPSK,16QAM,64QAM | 1 RB / 14 RB Offset<br>Full RB / 0 RB Offset |
|                    |                       | 18625 to 19175    | 18625               | 5MHz              | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       |                   | 19175               | 5MHz              | QPSK,16QAM,64QAM | 1 RB / 24 RB Offset<br>Full RB / 0 RB Offset |
|                    |                       | 18650 to 19150    | 18650               | 10MHz             | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |
|                    |                       |                   | 19150               | 10MHz             | QPSK,16QAM,64QAM | 1 RB / 49 RB Offset<br>Full RB / 0 RB Offset |
|                    |                       | 18675 to 19125    | 18675               | 15MHz             | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset  |



|   |                       |                |                     |                  |                     |                       |
|---|-----------------------|----------------|---------------------|------------------|---------------------|-----------------------|
|   |                       |                | 19125               | 15MHz            | QPSK,16QAM,64QAM    | 1 RB / 74 RB Offset   |
|   |                       |                |                     |                  |                     | Full RB / 0 RB Offset |
|   |                       | 18700 to 19100 | 18700               | 20MHz            | QPSK,16QAM,64QAM    | 1 RB / 0 RB Offset    |
|   |                       |                |                     |                  |                     | Full RB / 0 RB Offset |
|   |                       | 19100          | 20MHz               | QPSK,16QAM,64QAM | 1 RB / 99 RB Offset |                       |
|   |                       |                |                     |                  |                     | Full RB / 0 RB Offset |
| A | CONDCUDED<br>EMISSION | 18607 to 19193 | 18607, 18900, 19193 | 1.4MHz           | QPSK,16QAM,64QAM    | 1 RB / 0 RB Offset    |
|   |                       | 18615 to 19185 | 18615, 18900, 19185 | 3MHz             | QPSK,16QAM,64QAM    | 1 RB / 0 RB Offset    |
|   |                       | 18625 to 19175 | 18625, 18900, 19175 | 5MHz             | QPSK,16QAM,64QAM    | 1 RB / 0 RB Offset    |
|   |                       | 18650 to 19150 | 18650, 18900, 19150 | 10MHz            | QPSK,16QAM,64QAM    | 1 RB / 0 RB Offset    |
|   |                       | 18675 to 19125 | 18675, 18900, 19125 | 15MHz            | QPSK,16QAM,64QAM    | 1 RB / 0 RB Offset    |
|   |                       | 18700 to 19100 | 18700, 18900, 19100 | 20MHz            | QPSK,16QAM,64QAM    | 1 RB / 0 RB Offset    |
| A | RADIATED<br>EMISSION  | 18607 to 19193 | 18900               | 1.4MHz           | QPSK                | 1 RB / 0 RB Offset    |
|   |                       | 18615 to 19185 | 18900               | 3MHz             | QPSK                | 1 RB / 0 RB Offset    |
|   |                       | 18625 to 19175 | 18900               | 5MHz             | QPSK                | 1 RB / 0 RB Offset    |
|   |                       | 18650 to 19150 | 18900               | 10MHz            | QPSK                | 1 RB / 0 RB Offset    |
|   |                       | 18675 to 19125 | 18900               | 15MHz            | QPSK                | 1 RB / 0 RB Offset    |
|   |                       | 18700 to 19100 | 18700, 18900, 19100 | 20MHz            | QPSK                | 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.



**TEST CONDITION:**

| TEST ITEM             | ENVIRONMENTAL CONDITIONS | INPUT POWER                     | TESTED BY          |
|-----------------------|--------------------------|---------------------------------|--------------------|
| EIRP                  | 23deg. C, 70%RH          | DC 5.0V/ 9.0V/ 12.0V By Adapter | Hanwen Xu          |
| FREQUENCY STABILITY   | 23deg. C, 70%RH          | DC 3.6V/ 3.85V/ 4.4V By Battery | Hanwen Xu/ Jace Hu |
| OCCUPIED BANDWIDTH    | 23deg. C, 70%RH          | DC 5.0V/ 9.0V/ 12.0V By Adapter | Hanwen Xu/ Jace Hu |
| BAND EDGE             | 23deg. C, 70%RH          | DC 5.0V/ 9.0V/ 12.0V By Adapter | Hanwen Xu/ Jace Hu |
| CONDCUDED EMISSION    | 23deg. C, 70%RH          | DC 5.0V/ 9.0V/ 12.0V By Adapter | Hanwen Xu/ Jace Hu |
| RADIATED EMISSION     | 23deg. C, 70%RH          | DC 5.0V/ 9.0V/ 12.0V By Adapter | Hanwen Xu/ Jace Hu |
| PEAK TO AVERAGE RATIO | 23deg. C, 70%RH          | DC 5.0V/ 9.0V/ 12.0V By Adapter | Hanwen Xu/ Jace Hu |

**2.5 EUT OPERATING CONDITIONS**

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency.

**2.6 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 24**

**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

Mobile and portable stations are limited to 2 watts EIRP.

#### 3.1.2 TEST PROCEDURES

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

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

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

Where:

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

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

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

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

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

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

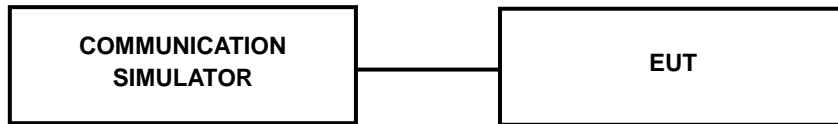
The EUT was set up for the maximum power with WCDMA link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



### 3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



### 3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm) :

| Band           | GSM1900      |       |        |
|----------------|--------------|-------|--------|
| Channel        | 512          | 661   | 810    |
| Frequency(MHz) | 1850.2       | 1880  | 1909.8 |
| <b>GSM</b>     | <b>30.37</b> | 30.35 | 30.20  |
| GPRS 1Tx Slot  | 30.35        | 30.33 | 30.17  |
| GPRS 2Tx Slot  | 28.21        | 28.08 | 28.09  |
| GPRS 3Tx Slot  | 26.28        | 26.18 | 26.20  |
| GPRS 4Tx Slot  | 25.31        | 25.11 | 25.14  |
| EDGE 1Tx Slot  | 25.27        | 25.23 | 25.12  |
| EDGE 2Tx Slot  | 24.32        | 24.29 | 24.25  |
| EDGE 3Tx Slot  | 23.35        | 23.23 | 23.36  |
| EDGE 4Tx Slot  | 22.80        | 22.76 | 22.76  |

| Band             | CDMA2000 BC1 |       |         |
|------------------|--------------|-------|---------|
| Channel          | 25           | 600   | 1175    |
| Frequency(MHz)   | 1851.25      | 1880  | 1908.75 |
| <b>RC1 SO55</b>  | <b>22.87</b> | 22.65 | 22.68   |
| RC3 SO55         | 22.85        | 22.64 | 22.67   |
| RC3 SO32 (F+SCH) | 22.84        | 22.62 | 22.66   |
| RC3 SO32 (+SCH)  | 22.82        | 22.61 | 22.66   |
| RTAP 153.6Kbps   | 22.81        | 22.60 | 22.65   |
| RETAP 4096Bits   | 22.80        | 22.58 | 22.63   |



| Band               | WCDMA II |       |        |
|--------------------|----------|-------|--------|
|                    | 9262     | 9400  | 9538   |
| TX Channel         | 9262     | 9400  | 9538   |
| Rx Channel         | 9662     | 9800  | 9938   |
| Frequency(MHz)     | 1852.4   | 1880  | 1907.6 |
| RMC 12.2K          | 23.13    | 23.05 | 23.17  |
| HSDPA Subtest-1    | 22.55    | 22.47 | 22.59  |
| HSDPA Subtest-2    | 22.54    | 22.46 | 22.58  |
| HSDPA Subtest-3    | 22.03    | 21.95 | 22.07  |
| HSDPA Subtest-4    | 22.02    | 21.94 | 22.06  |
| DC-HSDPA Subtest-1 | 22.47    | 22.41 | 22.51  |
| DC-HSDPA Subtest-2 | 22.46    | 22.40 | 22.50  |
| DC-HSDPA Subtest-3 | 22.04    | 21.89 | 22.01  |
| DC-HSDPA Subtest-4 | 22.03    | 21.88 | 22.00  |
| HSUPA Subtest-1    | 22.51    | 22.43 | 22.55  |
| HSUPA Subtest-2    | 21.50    | 21.42 | 21.54  |
| HSUPA Subtest-3    | 21.98    | 21.91 | 22.03  |
| HSUPA Subtest-4    | 21.47    | 21.40 | 21.52  |
| HSUPA Subtest-5    | 22.46    | 22.39 | 22.51  |
| HSPA+ Subtest-1    | 22.02    | 21.96 | 22.08  |



**LTE BAND 2**

| Band/BW | Modulation | RB Size | RB Offset | Low CH 18607         | Mid CH 18900       | High CH 19193        |
|---------|------------|---------|-----------|----------------------|--------------------|----------------------|
|         |            |         |           | Frequency 1850.7 MHz | Frequency 1880 MHz | Frequency 1909.3 MHz |
| 2/ 1.4  | QPSK       | 1       | 0         | 22.41                | 22.39              | 22.43                |
|         |            | 1       | 2         | 22.56                | 22.71              | 22.66                |
|         |            | 1       | 5         | 22.15                | 22.27              | 22.23                |
|         |            | 3       | 0         | 22.58                | 22.64              | 22.61                |
|         |            | 3       | 1         | 22.75                | 22.83              | 22.75                |
|         |            | 3       | 3         | 22.40                | 22.55              | 22.47                |
|         |            | 6       | 0         | 21.47                | 21.62              | 21.55                |
|         | 16QAM      | 1       | 0         | 21.66                | 21.85              | 21.77                |
|         |            | 1       | 2         | 21.94                | 22.05              | 21.86                |
|         |            | 1       | 5         | 21.35                | 21.62              | 21.61                |
|         |            | 3       | 0         | 21.53                | 21.62              | 21.67                |
|         |            | 3       | 1         | 21.67                | 21.79              | 21.85                |
|         |            | 3       | 3         | 21.37                | 21.60              | 21.54                |
|         |            | 6       | 0         | 20.43                | 20.56              | 20.58                |
|         | 64QAM      | 1       | 0         | 20.61                | 20.72              | 20.63                |
|         |            | 1       | 2         | 20.85                | 20.88              | 20.79                |
|         |            | 1       | 5         | 20.34                | 20.29              | 20.32                |
|         |            | 3       | 0         | 20.54                | 20.63              | 20.69                |
|         |            | 3       | 1         | 20.56                | 20.72              | 20.76                |
|         |            | 3       | 3         | 20.35                | 20.56              | 20.48                |
|         |            | 6       | 0         | 19.46                | 19.48              | 19.67                |



| Band/BW | Modulation | RB Size | RB Offset | Low CH 18615         | Mid CH 18900       | High CH 19185        |
|---------|------------|---------|-----------|----------------------|--------------------|----------------------|
|         |            |         |           | Frequency 1851.5 MHz | Frequency 1880 MHz | Frequency 1908.5 MHz |
| 2/3     | QPSK       | 1       | 0         | 22.52                | 22.42              | 22.41                |
|         |            | 1       | 7         | 22.52                | 22.69              | 22.63                |
|         |            | 1       | 14        | 22.18                | 22.15              | 22.18                |
|         |            | 8       | 0         | 21.55                | 21.74              | 21.70                |
|         |            | 8       | 3         | 21.67                | 21.81              | 21.75                |
|         |            | 8       | 7         | 21.48                | 21.65              | 21.58                |
|         |            | 15      | 0         | 21.45                | 21.59              | 21.65                |
|         | 16QAM      | 1       | 0         | 21.77                | 21.73              | 21.74                |
|         |            | 1       | 7         | 22.00                | 22.13              | 21.95                |
|         |            | 1       | 14        | 21.33                | 21.55              | 21.49                |
|         |            | 8       | 0         | 20.60                | 20.63              | 20.58                |
|         |            | 8       | 3         | 20.66                | 20.79              | 20.85                |
|         |            | 8       | 7         | 20.38                | 20.49              | 20.47                |
|         |            | 15      | 0         | 20.42                | 20.65              | 20.65                |
|         | 64QAM      | 1       | 0         | 20.49                | 20.68              | 20.73                |
|         |            | 1       | 7         | 20.84                | 20.77              | 20.70                |
|         |            | 1       | 14        | 20.26                | 20.42              | 20.33                |
|         |            | 8       | 0         | 19.47                | 19.60              | 19.67                |
|         |            | 8       | 3         | 19.61                | 19.64              | 19.67                |
|         |            | 8       | 7         | 19.30                | 19.58              | 19.44                |
|         |            | 15      | 0         | 19.53                | 19.50              | 19.66                |





| Band/BW | Modulation | RB Size | RB Offset | Low CH 18625         | Mid CH 18900       | High CH 19175        |
|---------|------------|---------|-----------|----------------------|--------------------|----------------------|
|         |            |         |           | Frequency 1852.5 MHz | Frequency 1880 MHz | Frequency 1907.5 MHz |
| 2/5     | QPSK       | 1       | 0         | 22.43                | 22.40              | 22.46                |
|         |            | 1       | 12        | 22.46                | 22.66              | 22.64                |
|         |            | 1       | 24        | 22.18                | 22.23              | 22.23                |
|         |            | 12      | 0         | 21.50                | 21.61              | 21.71                |
|         |            | 12      | 6         | 21.71                | 21.72              | 21.78                |
|         |            | 12      | 13        | 21.40                | 21.61              | 21.58                |
|         |            | 25      | 0         | 21.51                | 21.66              | 21.65                |
|         | 16QAM      | 1       | 0         | 21.72                | 21.72              | 21.70                |
|         |            | 1       | 12        | 21.92                | 22.07              | 21.89                |
|         |            | 1       | 24        | 21.34                | 21.57              | 21.60                |
|         |            | 12      | 0         | 20.62                | 20.63              | 20.58                |
|         |            | 12      | 6         | 20.64                | 20.73              | 20.79                |
|         |            | 12      | 13        | 20.41                | 20.50              | 20.46                |
|         |            | 25      | 0         | 20.45                | 20.68              | 20.65                |
|         | 64QAM      | 1       | 0         | 20.61                | 20.65              | 20.68                |
|         |            | 1       | 12        | 20.79                | 20.79              | 20.70                |
|         |            | 1       | 24        | 20.26                | 20.35              | 20.43                |
|         |            | 12      | 0         | 19.57                | 19.73              | 19.61                |
|         |            | 12      | 6         | 19.62                | 19.66              | 19.66                |
|         |            | 12      | 13        | 19.35                | 19.51              | 19.56                |
|         |            | 25      | 0         | 19.55                | 19.49              | 19.60                |



| Band/BW | Modulation | RB Size | RB Offset | Low CH 18650       | Mid CH 18900       | High CH 19150      |
|---------|------------|---------|-----------|--------------------|--------------------|--------------------|
|         |            |         |           | Frequency 1855 MHz | Frequency 1880 MHz | Frequency 1905 MHz |
| 2/ 10   | QPSK       | 1       | 0         | 22.40              | 22.43              | 22.50              |
|         |            | 1       | 24        | 22.50              | 22.64              | 22.66              |
|         |            | 1       | 49        | 22.18              | 22.18              | 22.24              |
|         |            | 25      | 0         | 21.55              | 21.68              | 21.69              |
|         |            | 25      | 12        | 21.73              | 21.78              | 21.69              |
|         |            | 25      | 25        | 21.47              | 21.64              | 21.53              |
|         |            | 50      | 0         | 21.59              | 21.63              | 21.55              |
|         | 16QAM      | 1       | 0         | 21.69              | 21.72              | 21.73              |
|         |            | 1       | 24        | 21.95              | 22.12              | 21.95              |
|         |            | 1       | 49        | 21.38              | 21.60              | 21.55              |
|         |            | 25      | 0         | 20.59              | 20.63              | 20.66              |
|         |            | 25      | 12        | 20.61              | 20.86              | 20.78              |
|         |            | 25      | 25        | 20.34              | 20.55              | 20.48              |
|         |            | 50      | 0         | 20.53              | 20.55              | 20.59              |
|         | 64QAM      | 1       | 0         | 20.58              | 20.66              | 20.73              |
|         |            | 1       | 24        | 20.79              | 20.75              | 20.77              |
|         |            | 1       | 49        | 20.29              | 20.38              | 20.45              |
|         |            | 25      | 0         | 19.51              | 19.60              | 19.58              |
|         |            | 25      | 12        | 19.57              | 19.68              | 19.70              |
|         |            | 25      | 25        | 19.37              | 19.53              | 19.54              |
|         |            | 50      | 0         | 19.49              | 19.56              | 19.65              |



| Band/BW | Modulation | RB Size | RB Offset | Low CH 18675         | Mid CH 18900       | High CH 19125        |
|---------|------------|---------|-----------|----------------------|--------------------|----------------------|
|         |            |         |           | Frequency 1857.5 MHz | Frequency 1880 MHz | Frequency 1902.5 MHz |
| 2/ 15   | QPSK       | 1       | 0         | 22.50                | 22.39              | 22.46                |
|         |            | 1       | 37        | 22.51                | 22.66              | 22.72                |
|         |            | 1       | 74        | 22.19                | 22.23              | 22.18                |
|         |            | 36      | 0         | 21.64                | 21.62              | 21.68                |
|         |            | 36      | 19        | 21.67                | 21.82              | 21.79                |
|         |            | 36      | 39        | 21.45                | 21.66              | 21.44                |
|         |            | 75      | 0         | 21.53                | 21.63              | 21.63                |
|         | 16QAM      | 1       | 0         | 21.74                | 21.76              | 21.80                |
|         |            | 1       | 37        | 21.94                | 22.06              | 21.84                |
|         |            | 1       | 74        | 21.34                | 21.64              | 21.62                |
|         |            | 36      | 0         | 20.51                | 20.68              | 20.63                |
|         |            | 36      | 19        | 20.68                | 20.77              | 20.79                |
|         |            | 36      | 39        | 20.28                | 20.48              | 20.57                |
|         |            | 75      | 0         | 20.52                | 20.64              | 20.65                |
|         | 64QAM      | 1       | 0         | 20.52                | 20.76              | 20.64                |
|         |            | 1       | 37        | 20.74                | 20.88              | 20.80                |
|         |            | 1       | 74        | 20.32                | 20.30              | 20.42                |
|         |            | 36      | 0         | 19.53                | 19.69              | 19.59                |
|         |            | 36      | 19        | 19.63                | 19.70              | 19.74                |
|         |            | 36      | 39        | 19.37                | 19.57              | 19.56                |
|         |            | 75      | 0         | 19.49                | 19.58              | 19.62                |



| Band/BW | Modulation | RB Size | RB Offset | Low CH 18700       | Mid CH 18900       | High CH 19100      |
|---------|------------|---------|-----------|--------------------|--------------------|--------------------|
|         |            |         |           | Frequency 1860 MHz | Frequency 1880 MHz | Frequency 1900 MHz |
| 2/ 20   | QPSK       | 1       | 0         | 22.55              | 22.49              | 22.54              |
|         |            | 1       | 50        | 22.60              | <b>22.76</b>       | 22.73              |
|         |            | 1       | 99        | 22.25              | 22.30              | 22.33              |
|         |            | 50      | 0         | 21.65              | 21.75              | 21.74              |
|         |            | 50      | 25        | 21.78              | 21.86              | 21.82              |
|         |            | 50      | 50        | 21.49              | 21.70              | 21.59              |
|         |            | 100     | 0         | 21.60              | 21.69              | 21.67              |
|         | 16QAM      | 1       | 0         | 21.81              | 21.86              | 21.82              |
|         |            | 1       | 50        | 22.06              | 22.19              | 21.99              |
|         |            | 1       | 99        | 21.43              | 21.67              | 21.64              |
|         |            | 50      | 0         | 20.64              | 20.72              | 20.68              |
|         |            | 50      | 25        | 20.75              | 20.88              | 20.86              |
|         |            | 50      | 50        | 20.42              | 20.61              | 20.59              |
|         |            | 100     | 0         | 20.57              | 20.70              | 20.68              |
|         | 64QAM      | 1       | 0         | 20.62              | 20.78              | 20.75              |
|         |            | 1       | 50        | 20.86              | 20.89              | 20.85              |
|         |            | 1       | 99        | 20.35              | 20.43              | 20.46              |
|         |            | 50      | 0         | 19.61              | 19.74              | 19.70              |
|         |            | 50      | 25        | 19.70              | 19.79              | 19.80              |
|         |            | 50      | 50        | 19.41              | 19.64              | 19.59              |
|         |            | 100     | 0         | 19.57              | 19.61              | 19.71              |



**EIRP POWER (dBm)**

**GSM 1900**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 512     | 1850.2          | 30.37                 | -0.6                                | 29.77      | 948.42    | 2         |
| 661     | 1880            | 30.35                 | -0.6                                | 29.75      | 944.06    | 2         |
| 810     | 1909.8          | 30.2                  | -0.6                                | 29.6       | 912.01    | 2         |

**EDGE 1900**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 512     | 1850.2          | 25.27                 | -0.6                                | 24.67      | 293.09    | 2         |
| 661     | 1880            | 25.23                 | -0.6                                | 24.63      | 290.4     | 2         |
| 810     | 1909.8          | 25.12                 | -0.6                                | 24.52      | 283.14    | 2         |

**CDMA2000 BC1 1xRTT**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 25      | 1851.25         | 22.87                 | -0.6                                | 22.27      | 168.66    | 2         |
| 600     | 1880            | 22.65                 | -0.6                                | 22.05      | 160.32    | 2         |
| 1175    | 1908.75         | 22.68                 | -0.6                                | 22.08      | 161.44    | 2         |

**CDMA2000 BC1 1xEV-DO**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 25      | 1851.25         | 22.81                 | -0.6                                | 22.21      | 166.34    | 2         |
| 600     | 1880            | 22.6                  | -0.6                                | 22         | 158.49    | 2         |
| 1175    | 1908.75         | 22.65                 | -0.6                                | 22.05      | 160.32    | 2         |

**WCDMA II**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 9262    | 1852.4          | 23.13                 | -0.6                                | 22.53      | 179.06    | 2         |
| 9400    | 1880            | 23.05                 | -0.6                                | 22.45      | 175.79    | 2         |
| 9538    | 1907.6          | 23.17                 | -0.6                                | 22.57      | 180.72    | 2         |



**LTE BAND 2**

**CHANNEL BANDWIDTH: 1.4MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18607   | 1850.7          | 22.75                 | -0.6                   | 22.15      | 164.06    | 2         |
| 18900   | 1880.0          | 22.83                 | -0.6                   | 22.23      | 167.11    | 2         |
| 19193   | 1909.3          | 22.75                 | -0.6                   | 22.15      | 164.06    | 2         |

**CHANNEL BANDWIDTH: 1.4MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18607   | 1850.7          | 21.94                 | -0.6                   | 21.34      | 136.14    | 2         |
| 18900   | 1880.0          | 22.05                 | -0.6                   | 21.45      | 139.64    | 2         |
| 19193   | 1909.3          | 21.86                 | -0.6                   | 21.26      | 133.66    | 2         |

**CHANNEL BANDWIDTH: 1.4MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18607   | 1850.7          | 20.85                 | -0.6                   | 20.25      | 105.93    | 2         |
| 18900   | 1880            | 20.88                 | -0.6                   | 20.28      | 106.66    | 2         |
| 19193   | 1909.3          | 20.79                 | -0.6                   | 20.19      | 104.47    | 2         |



**CHANNEL BANDWIDTH: 3MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-L<sub>C</sub></sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-----------------------------------|------------|-----------|-----------|
| 18615   | 1851.5          | 22.52                 | -0.6                              | 21.92      | 155.6     | 2         |
| 18900   | 1880            | 22.69                 | -0.6                              | 22.09      | 161.81    | 2         |
| 19185   | 1908.5          | 22.63                 | -0.6                              | 22.03      | 159.59    | 2         |

**CHANNEL BANDWIDTH: 3MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-L<sub>C</sub></sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-----------------------------------|------------|-----------|-----------|
| 18615   | 1851.5          | 22                    | -0.6                              | 21.4       | 138.04    | 2         |
| 18900   | 1880            | 22.13                 | -0.6                              | 21.53      | 142.23    | 2         |
| 19185   | 1908.5          | 21.95                 | -0.6                              | 21.35      | 136.46    | 2         |

**CHANNEL BANDWIDTH: 3MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-L<sub>C</sub></sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-----------------------------------|------------|-----------|-----------|
| 18615   | 1851.5          | 20.84                 | -0.6                              | 20.24      | 105.68    | 2         |
| 18900   | 1880            | 20.77                 | -0.6                              | 20.17      | 103.99    | 2         |
| 19185   | 1908.5          | 20.73                 | -0.6                              | 20.13      | 103.04    | 2         |



**CHANNEL BANDWIDTH: 5MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 18625   | 1852.5          | 22.46                 | -0.6                                | 21.86      | 153.46    | 2         |
| 18900   | 1880            | 22.66                 | -0.6                                | 22.06      | 160.69    | 2         |
| 19175   | 1907.5          | 22.64                 | -0.6                                | 22.04      | 159.96    | 2         |

**CHANNEL BANDWIDTH: 5MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 18625   | 1852.5          | 21.92                 | -0.6                                | 21.32      | 135.52    | 2         |
| 18900   | 1880            | 22.07                 | -0.6                                | 21.47      | 140.28    | 2         |
| 19175   | 1907.5          | 21.89                 | -0.6                                | 21.29      | 134.59    | 2         |

**CHANNEL BANDWIDTH: 5MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 18625   | 1852.5          | 20.79                 | -0.6                                | 20.19      | 104.47    | 2         |
| 18900   | 1880            | 20.79                 | -0.6                                | 20.19      | 104.47    | 2         |
| 19175   | 1907.5          | 20.7                  | -0.6                                | 20.1       | 102.33    | 2         |





**CHANNEL BANDWIDTH: 10MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18650   | 1855            | 22.5                  | -0.6                   | 21.9       | 154.88    | 2         |
| 18900   | 1880            | 22.64                 | -0.6                   | 22.04      | 159.96    | 2         |
| 19150   | 1905            | 22.66                 | -0.6                   | 22.06      | 160.69    | 2         |

**CHANNEL BANDWIDTH: 10MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18650   | 1855            | 21.95                 | -0.6                   | 21.35      | 136.46    | 2         |
| 18900   | 1880            | 22.12                 | -0.6                   | 21.52      | 141.91    | 2         |
| 19150   | 1905            | 21.95                 | -0.6                   | 21.35      | 136.46    | 2         |

**CHANNEL BANDWIDTH: 10MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18650   | 1855            | 20.79                 | -0.6                   | 20.19      | 104.47    | 2         |
| 18900   | 1880            | 20.75                 | -0.6                   | 20.15      | 103.51    | 2         |
| 19150   | 1905            | 20.77                 | -0.6                   | 20.17      | 103.99    | 2         |



**CHANNEL BANDWIDTH: 15MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18675   | 1857.5          | 22.51                 | -0.6                   | 21.91      | 155.24    | 2         |
| 18900   | 1880            | 22.66                 | -0.6                   | 22.06      | 160.69    | 2         |
| 19125   | 1902.5          | 22.72                 | -0.6                   | 22.12      | 162.93    | 2         |

**CHANNEL BANDWIDTH: 15MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18675   | 1857.5          | 21.94                 | -0.6                   | 21.34      | 136.14    | 2         |
| 18900   | 1880            | 22.06                 | -0.6                   | 21.46      | 139.96    | 2         |
| 19125   | 1902.5          | 21.84                 | -0.6                   | 21.24      | 133.05    | 2         |

**CHANNEL BANDWIDTH: 15MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T-Lc</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|------------------------|------------|-----------|-----------|
| 18675   | 1857.5          | 20.74                 | -0.6                   | 20.14      | 103.28    | 2         |
| 18900   | 1880            | 20.88                 | -0.6                   | 20.28      | 106.66    | 2         |
| 19125   | 1902.5          | 20.8                  | -0.6                   | 20.2       | 104.71    | 2         |



**CHANNEL BANDWIDTH: 20MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 18700   | 1860            | 22.6                  | -0.6                                | 22         | 158.49    | 2         |
| 18900   | 1880            | 22.76                 | -0.6                                | 22.16      | 164.44    | 2         |
| 19100   | 1900            | 22.73                 | -0.6                                | 22.13      | 163.31    | 2         |

**CHANNEL BANDWIDTH: 20MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 18700   | 1860            | 22.06                 | -0.6                                | 21.46      | 139.96    | 2         |
| 18900   | 1880            | 22.19                 | -0.6                                | 21.59      | 144.21    | 2         |
| 19100   | 1900            | 21.99                 | -0.6                                | 21.39      | 137.72    | 2         |

**CHANNEL BANDWIDTH: 20MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 18700   | 1860            | 20.86                 | -0.6                                | 20.26      | 106.17    | 2         |
| 18900   | 1880            | 20.89                 | -0.6                                | 20.29      | 106.91    | 2         |
| 19100   | 1900            | 20.85                 | -0.6                                | 20.25      | 105.93    | 2         |

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



### 3.2 FREQUENCY STABILITY MEASUREMENT

#### 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

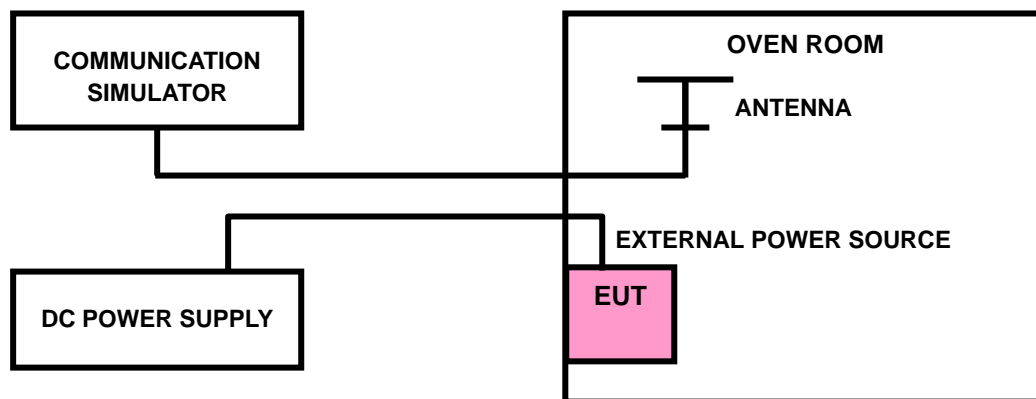
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

#### 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





**BUREAU  
VERITAS**

**Test Report No.: PSU-NQN2406210109RF02**

### 3.2.4 TEST RESULTS

Please Refer to Appendix Of this test report.

Note: VL = Low voltage(3.6V); VN/NV = Normal voltage(3.85V); VH = High voltage(4.4V);  
NT = Normal temperature (25°C)

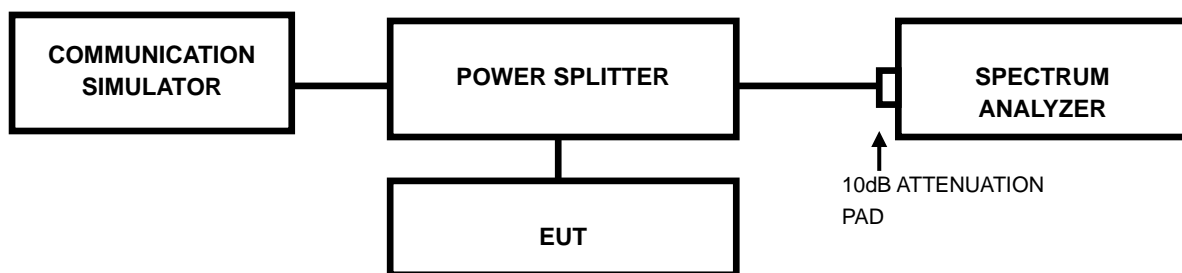


### 3.3 OCCUPIED BANDWIDTH MEASUREMENT

#### 3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

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

#### 3.3.2 TEST SETUP



#### 3.3.3 TEST PROCEDURES

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



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### 3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.

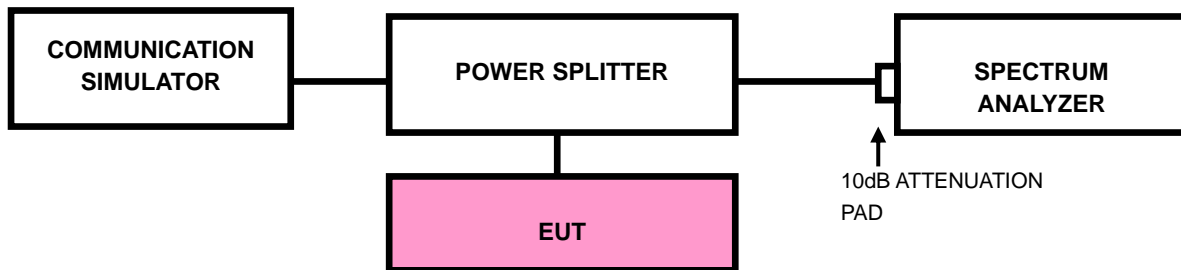


### 3.4 BAND EDGE MEASUREMENTC

#### 3.4.1 LIMITS OF BAND EDGE MEASUREMENT

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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

#### 3.4.2 TEST SETUP







### 3.4.3 TEST PROCEDURES

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



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### 3.4.4. TEST RESULTS

Please Refer to Appendix Of this test report.



### 3.5 CONDUCTED SPURIOUS EMISSIONS

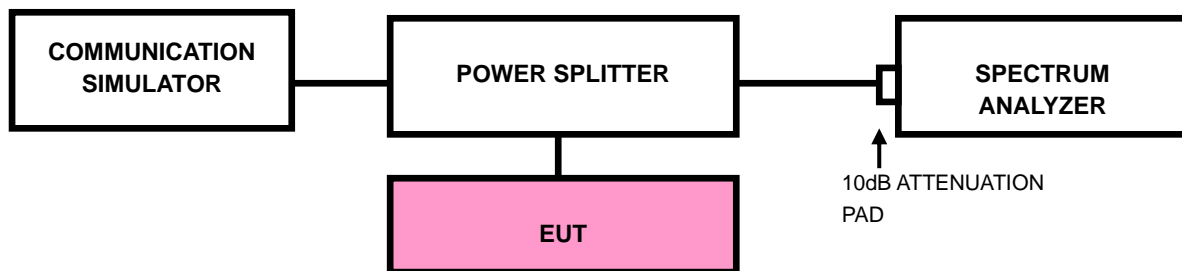
#### 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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

#### 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 30MHz 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





Test Report No.: PSU-NQN2406210109RF02

### 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

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

#### 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.  $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ .

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

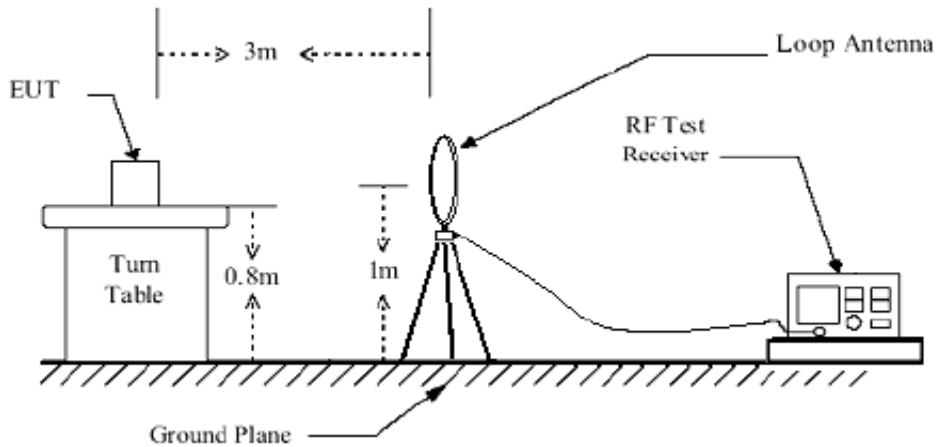
#### 3.6.3 DEVIATION FROM TEST STANDARD

No deviation

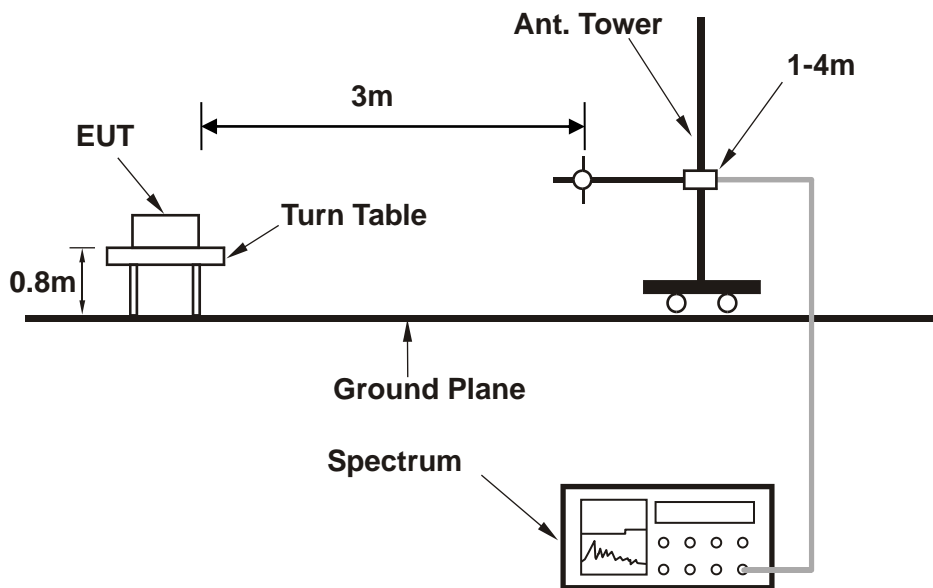


### 3.6.4 TEST SETUP

#### < Frequency Range below 30MHz >

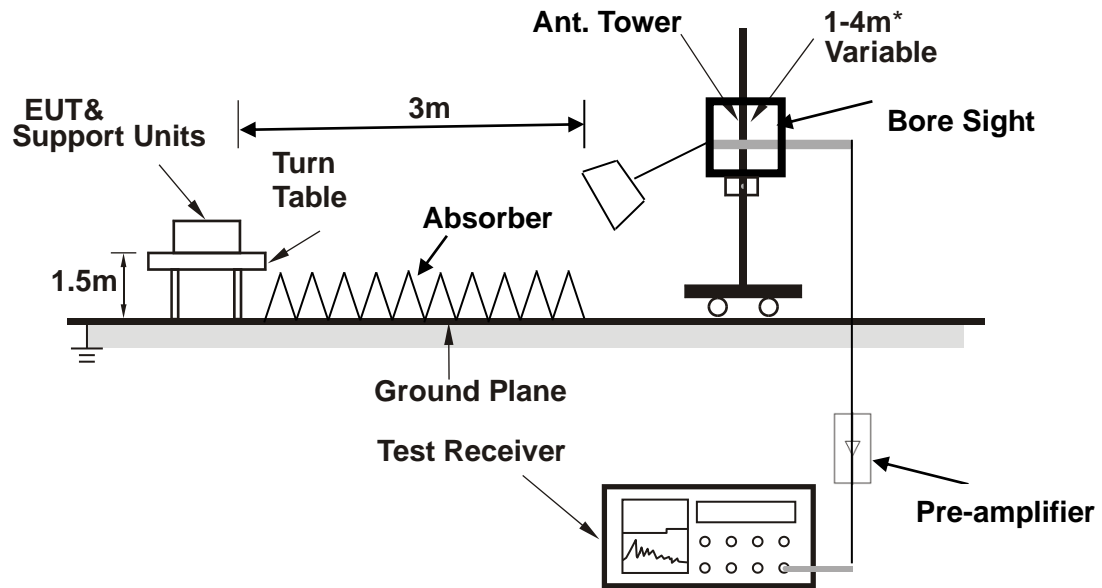


#### < Frequency Range 30MHz~1GHz >





<Frequency Range above 1GHz>



**Note:** Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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



### 3.6.5 TEST RESULTS

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

#### BELOW 1GHz WORST-CASE DATA

30 MHz – 1GHz data:

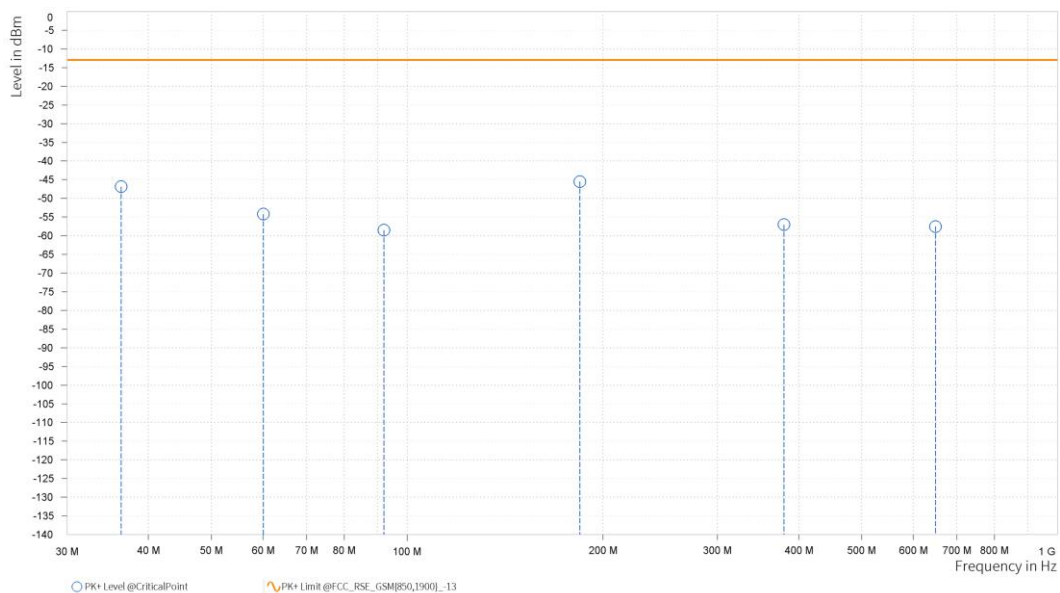
EDGE 1900:

CHANNEL BANDWIDTH: 512~810

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 661  | <b>FREQUENCY RANGE</b> | Below 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 1  | 36.305          | -46.88          | -13.0           | 33.88           | 4.55            | H            | 191.8         | 1.0                |
| 1  | 60.07           | -54.22          | -13.0           | 41.22           | 0.48            | H            | 289.8         | 1.0                |
| 1  | 92.08           | -58.51          | -13.0           | 45.51           | -5.51           | H            | 267.5         | 2.0                |
| 1  | 184.23          | -45.51          | -13.0           | 32.51           | -1.08           | H            | 191.8         | 1.0                |
| 1  | 379.685         | -57.04          | -13.0           | 44.04           | 6.29            | H            | 93.7          | 1.0                |
| 1  | 648.86          | -57.55          | -13.0           | 44.55           | 7.6             | H            | 359.0         | 2.0                |







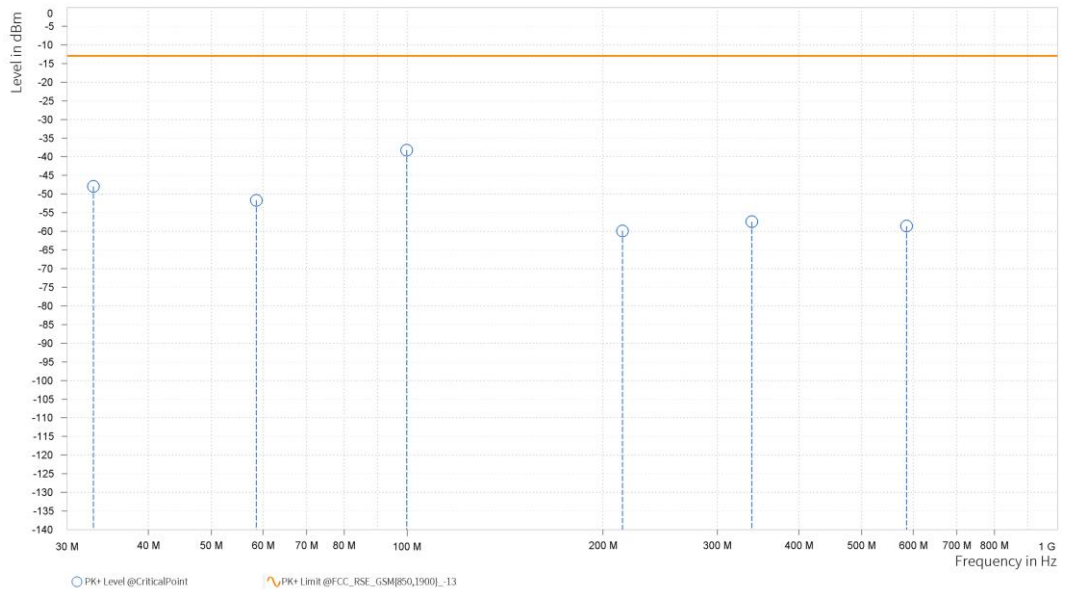
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 661  | <b>FREQUENCY RANGE</b> | Below 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 1  | 32.91           | -47.95          | -13.0           | 34.95           | -1.18           | V            | 359.1         | 1.0                |
| 1  | 58.615          | -51.66          | -13.0           | 38.66           | 1.98            | V            | 359.1         | 1.0                |
| 1  | 99.84           | -38.23          | -13.0           | 25.23           | 10.3            | V            | 269.4         | 1.0                |
| 1  | 214.3           | -59.9           | -13.0           | 46.9            | -1.77           | V            | 75.1          | 2.0                |
| 1  | 338.945         | -57.42          | -13.0           | 44.42           | 5.84            | V            | 75.1          | 2.0                |
| 1  | 585.81          | -58.61          | -13.0           | 45.61           | 6.75            | V            | 75.1          | 2.0                |





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Test Report No.: PSU-NQN2406210109RF02

ABOVE 1GHz DATA

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

WORST-CASE DATA

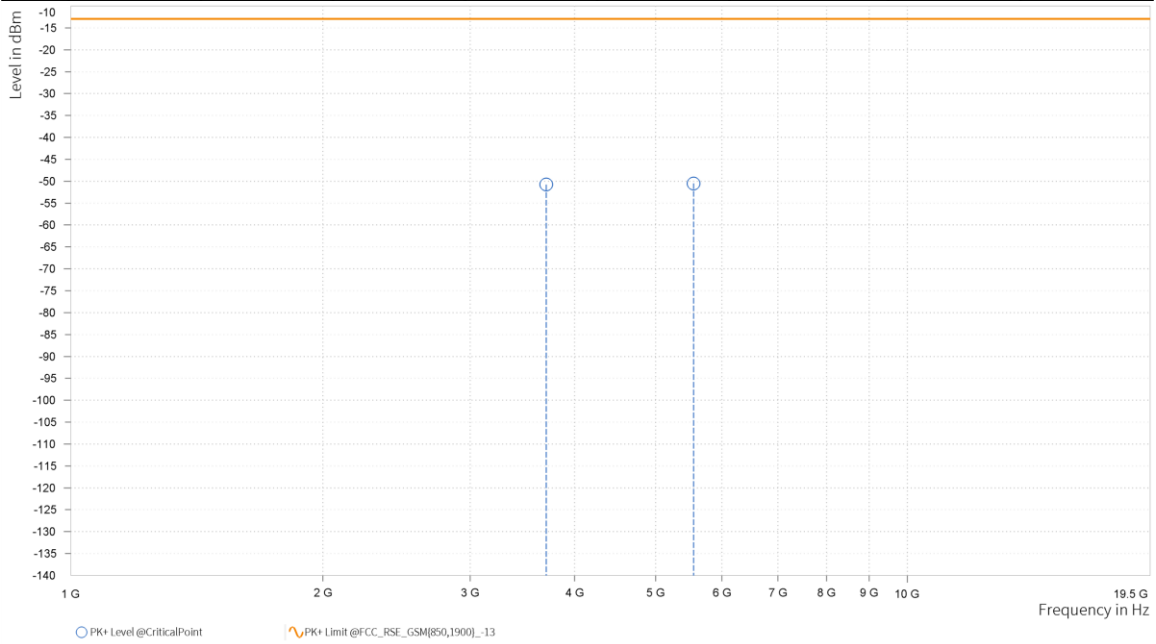
PCS 1900:

CH 512

|                          |                 |                 |               |
|--------------------------|-----------------|-----------------|---------------|
| MODE                     | TX channel 512  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER     | 120Vac 60HZ   |
| TESTED BY                | Hanwen Xu       |                 |               |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,700.000       | -50.75          | -13.0           | 37.75           | 20.98           | H            | 359           | 1.0                |
| 4  | 5,550.000       | -50.52          | -13.0           | 37.52           | 23.76           | H            | 359           | 2.0                |





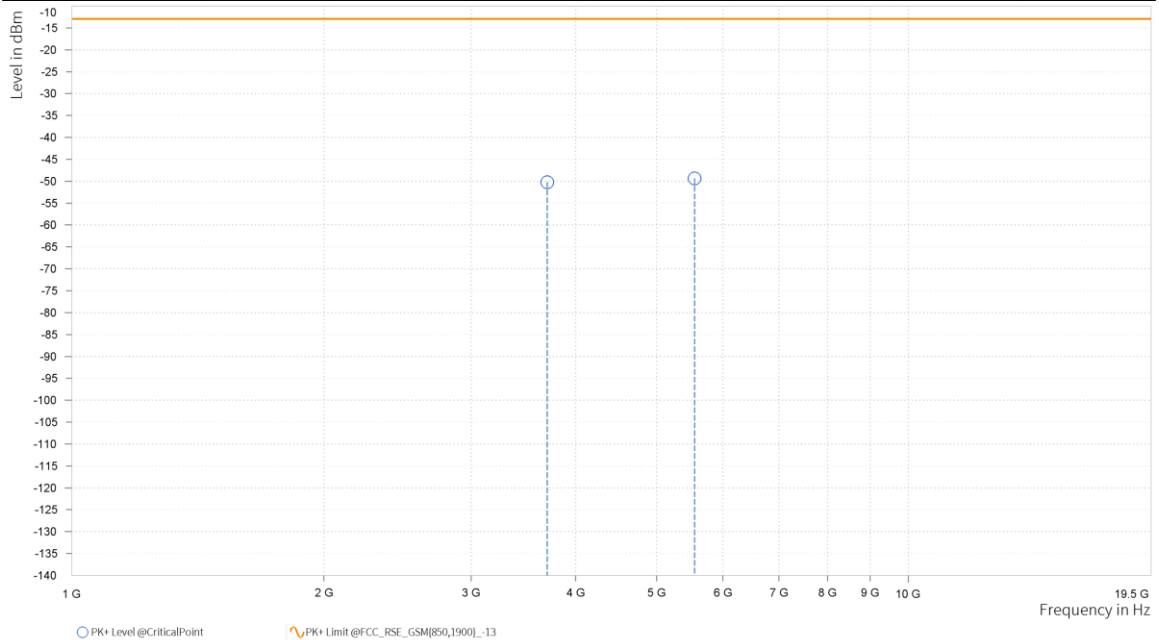
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 512  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,700.000       | -50.2           | -13.0           | 37.2            | 21.57           | V            | 359.1         | 1.0                |
| 4  | 5,550.000       | -49.35          | -13.0           | 36.35           | 24.45           | V            | 124.1         | 2.0                |





BUREAU VERITAS

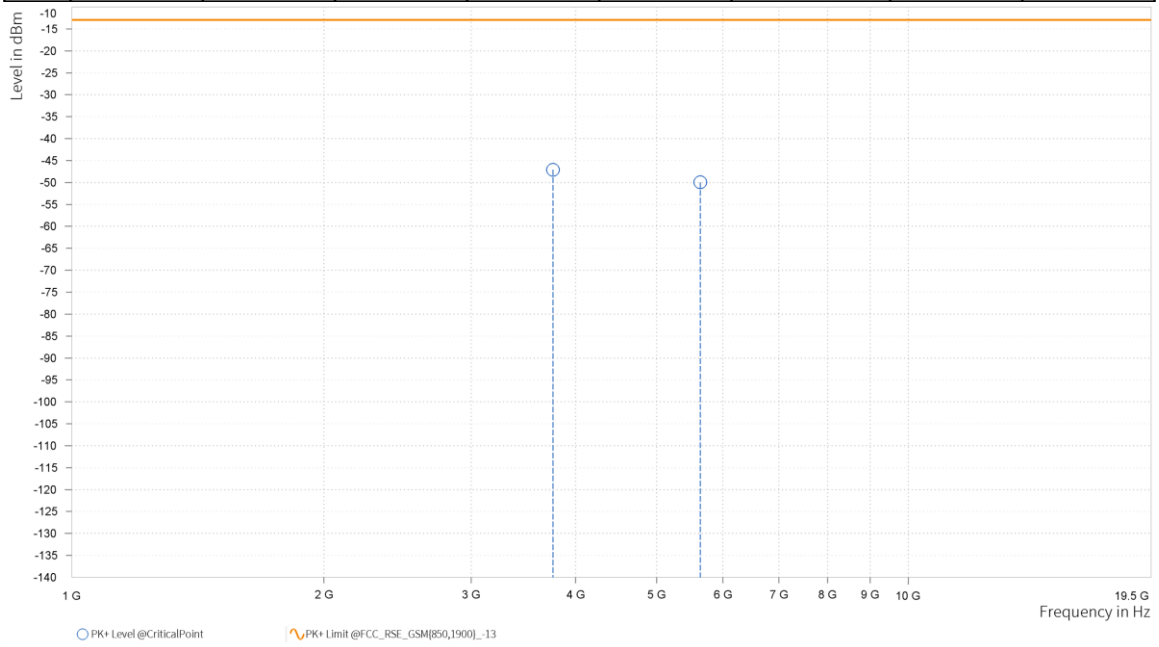
Test Report No.: PSU-NQN2406210109RF02

CH 661

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 661  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,760.000       | -47.08          | -13.0           | 34.08           | 21.19           | H            | 0.9           | 2.0                |
| 4  | 5,640.000       | -49.94          | -13.0           | 36.94           | 24.12           | H            | 359.1         | 1.0                |





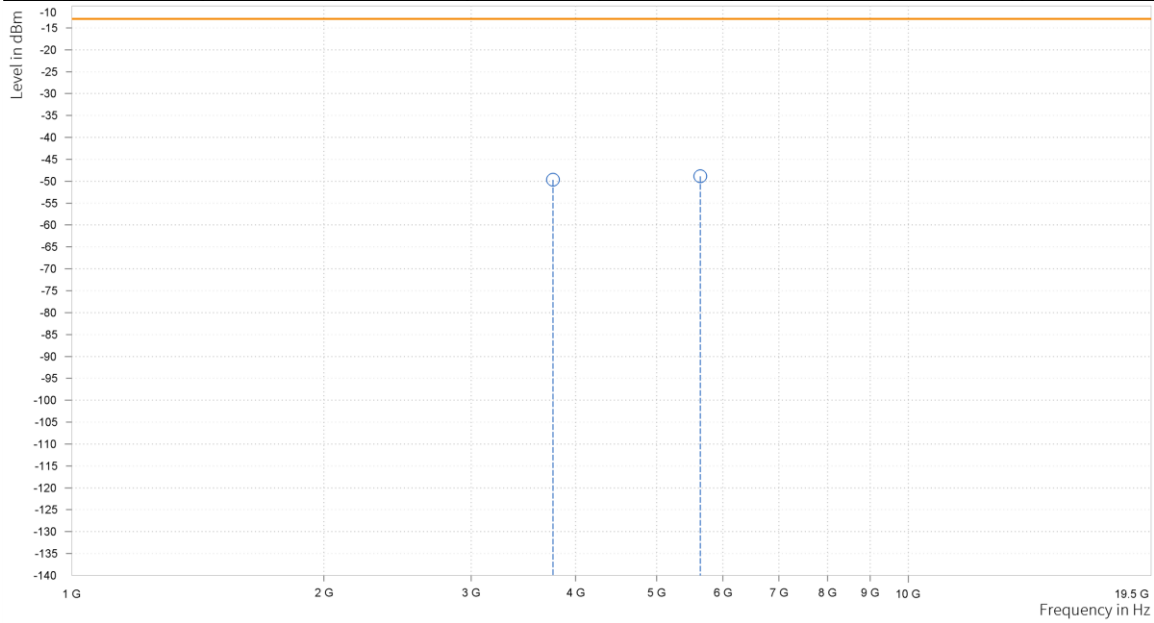
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 661  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,760.000       | -49.68          | -13.0           | 36.68           | 21.68           | V            | 359.1         | 1.0                |
| 4  | 5,640.000       | -48.88          | -13.0           | 35.88           | 24.46           | V            | 1.0           | 1.0                |





**BUREAU  
VERITAS**

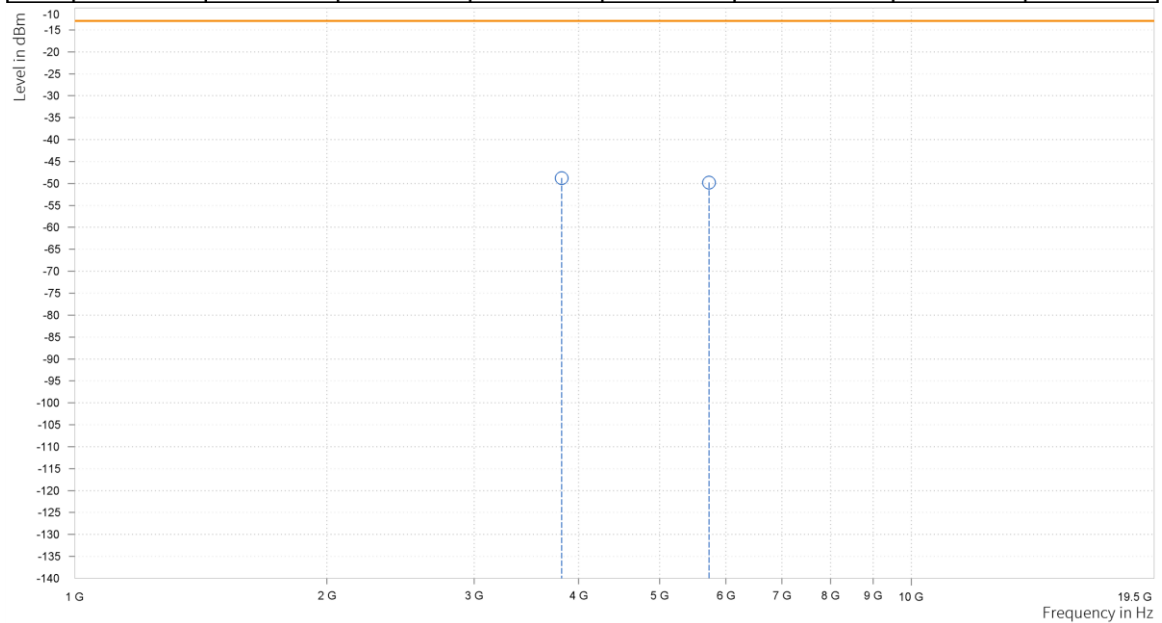
Test Report No.: PSU-NQN2406210109RF02

**CH 810**

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 810  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,819.600       | -48.76          | -13.0           | 35.76           | 21.85           | H            | 359.1         | 1.0                |
| 4  | 5,729.400       | -49.78          | -13.0           | 36.78           | 24.45           | H            | 234.6         | 1.0                |





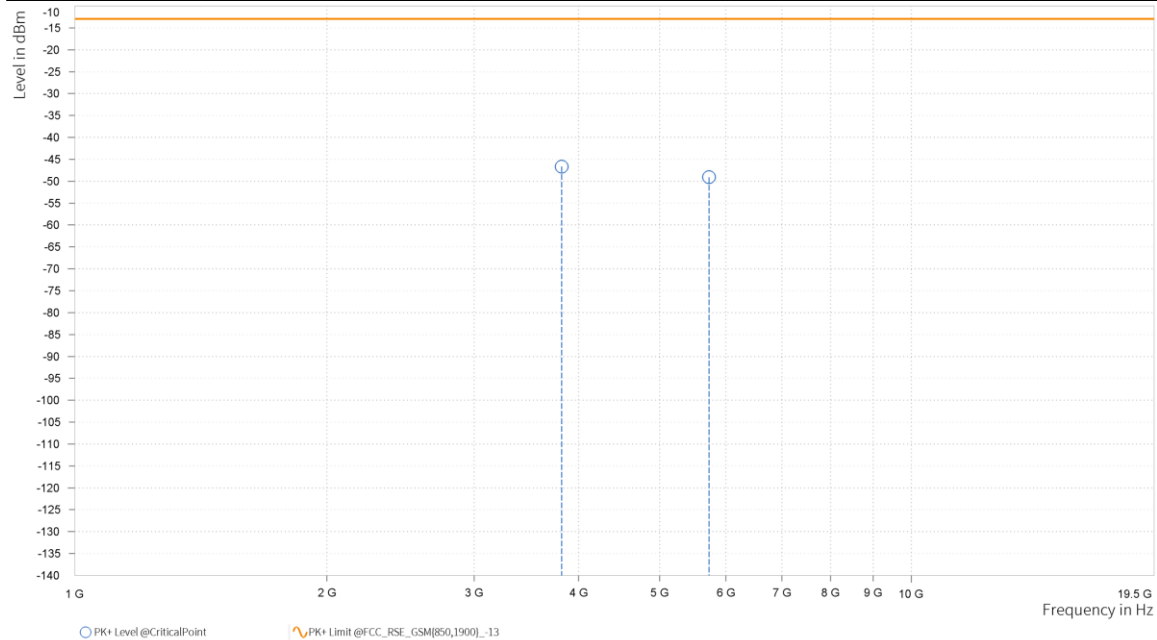
BUREAU VERITAS

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 810  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,819.600       | -46.66          | -13.0           | 33.66           | 22.2            | V            | 125.3         | 2.0                |
| 4  | 5,729.400       | -49.09          | -13.0           | 36.09           | 24.92           | V            | 359.1         | 1.0                |





**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

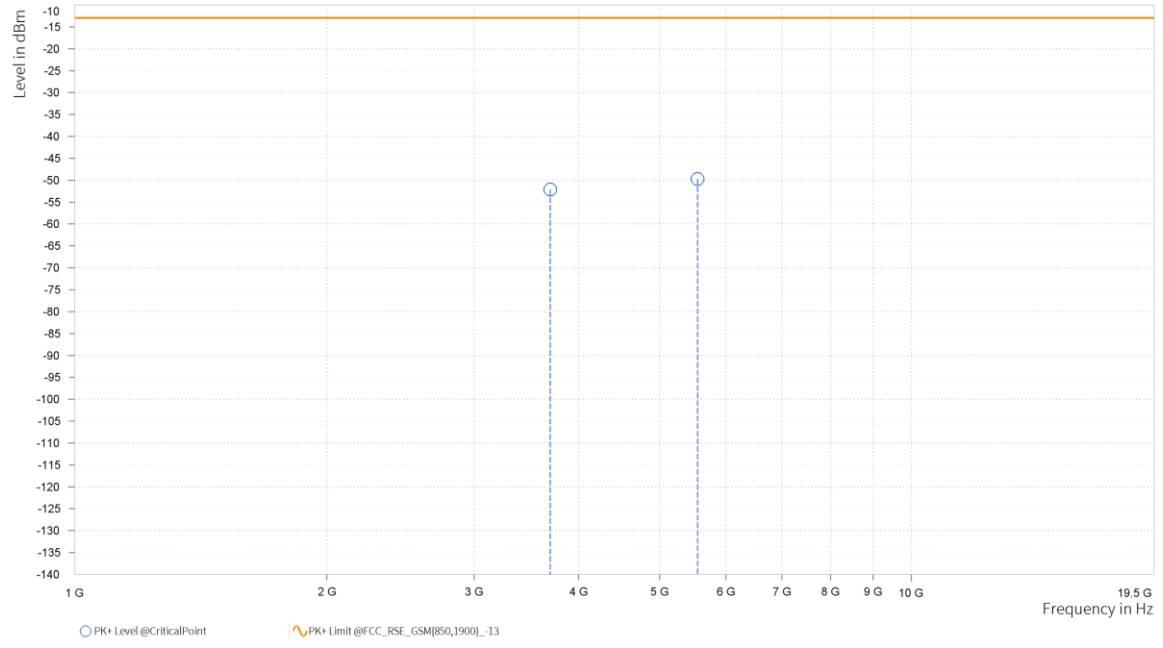
EDGE 1900:

CH 512

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 512  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,700.000       | -52.16          | -13.0           | 39.16           | 20.98           | H            | 359.0         | 1.0                |
| 4  | 5,550.000       | -49.7           | -13.0           | 36.7            | 23.76           | H            | 235.8         | 1.0                |







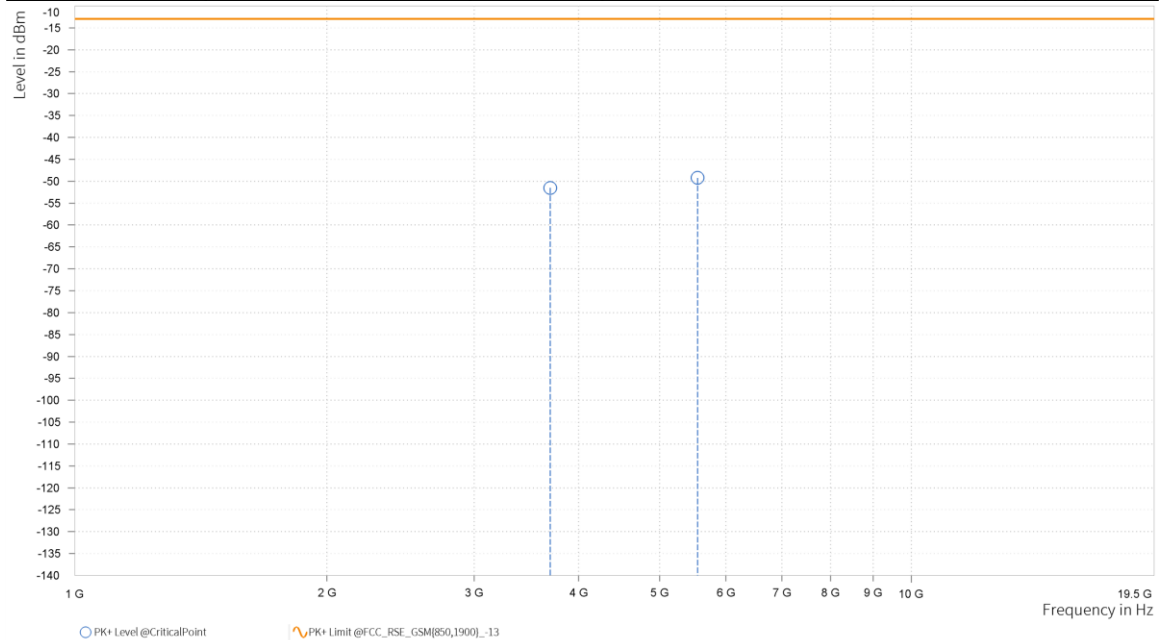
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 512  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,700.000       | -51.52          | -13.0           | 38.52           | 21.57           | V            | 359.0         | 2.0                |
| 4  | 5,550.000       | -49.23          | -13.0           | 36.23           | 24.45           | V            | 0.9           | 2.0                |





**BUREAU  
VERITAS**

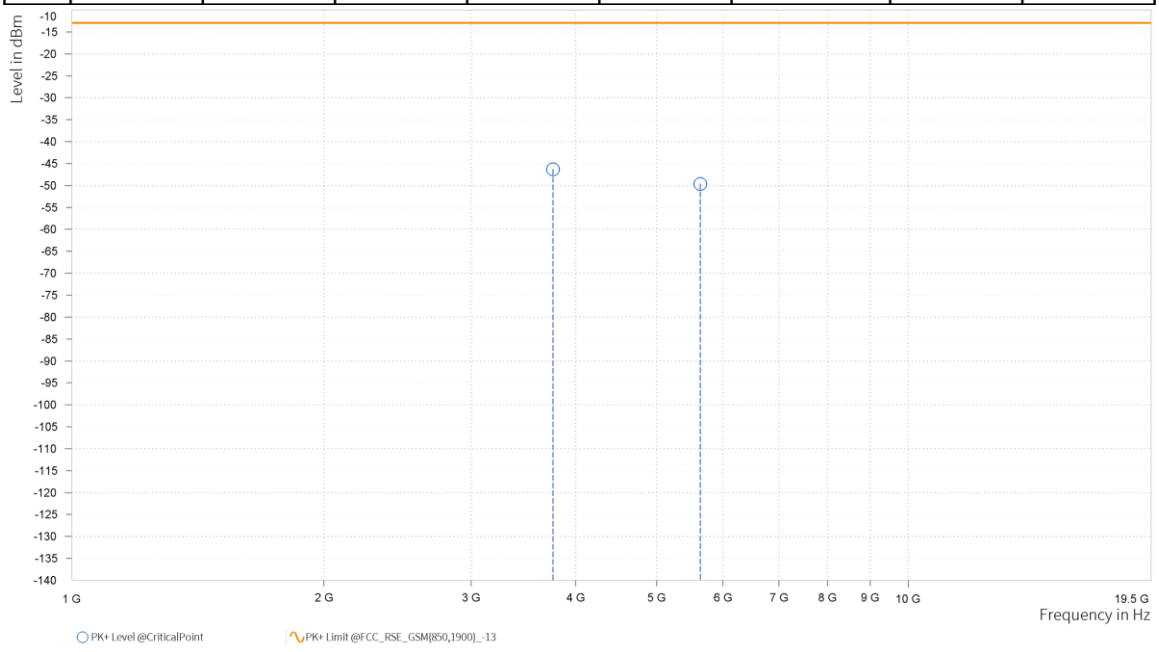
Test Report No.: PSU-NQN2406210109RF02

**CH 661**

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 661  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,760.000       | -46.31          | -13.0           | 33.31           | 21.19           | H            | 235.9         | 1.0                |
| 4  | 5,640.000       | -49.62          | -13.0           | 36.62           | 24.12           | H            | 125.3         | 2.0                |





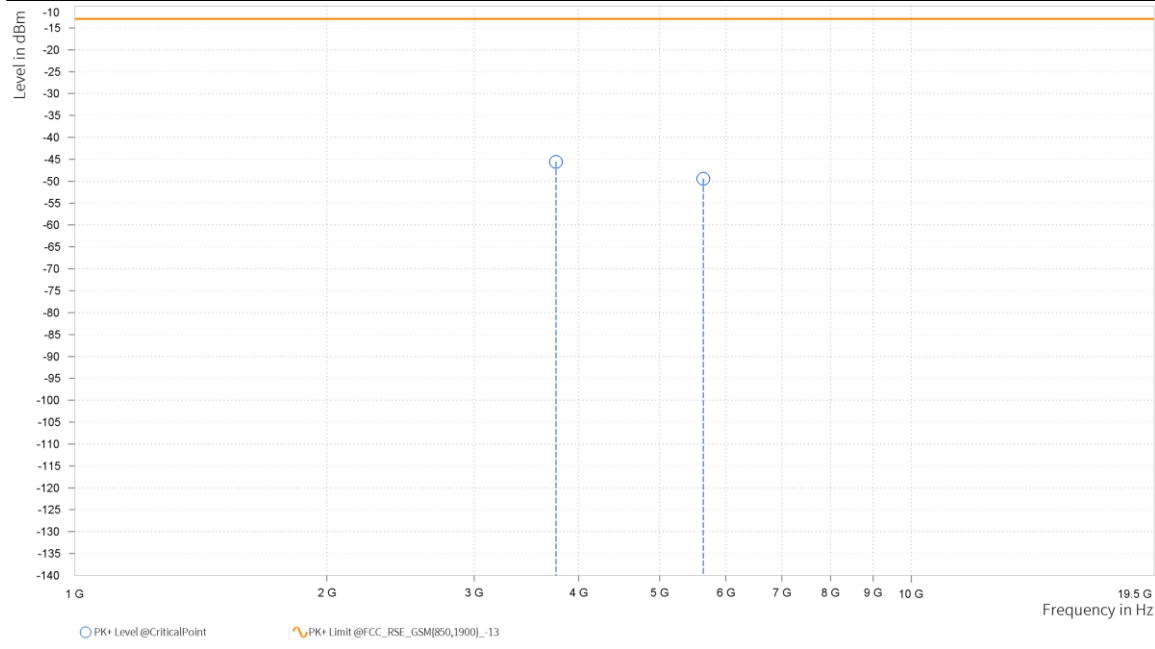
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 661  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,760.000       | -45.56          | -13.0           | 32.56           | 21.68           | V            | 124.1         | 2.0                |
| 4  | 5,640.000       | -49.41          | -13.0           | 36.41           | 24.46           | V            | 0.9           | 2.0                |





**BUREAU  
VERITAS**

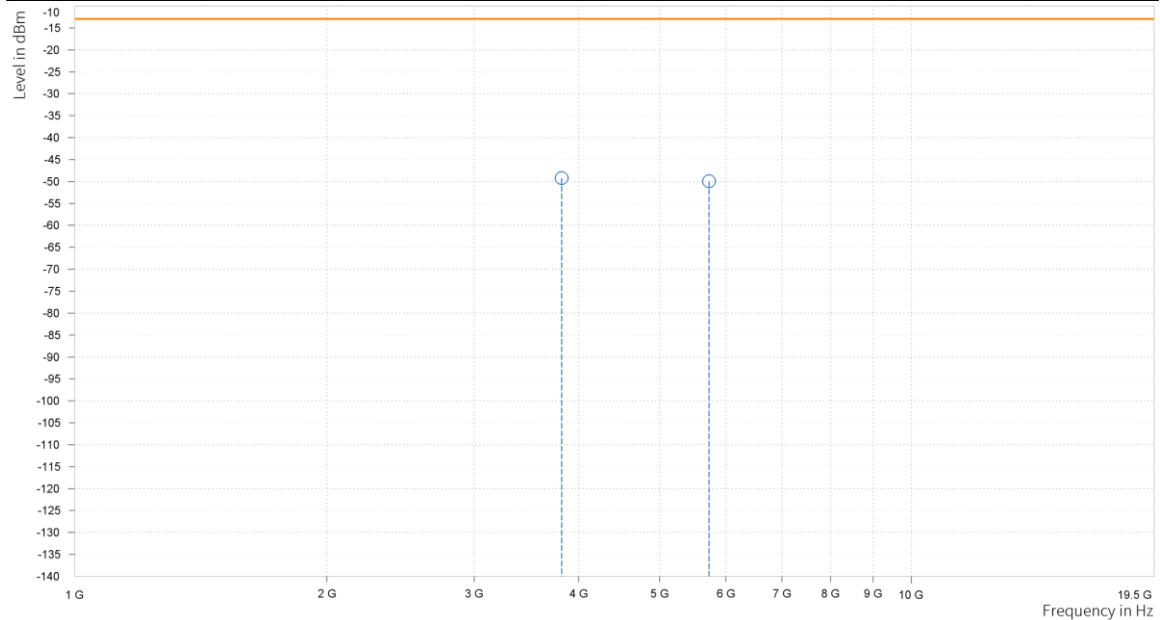
Test Report No.: PSU-NQN2406210109RF02

**CH 810**

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 810  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,819.600       | -49.25          | -13.0           | 36.25           | 21.85           | H            | 0.9           | 2.0                |
| 4  | 5,729.400       | -49.91          | -13.0           | 36.91           | 24.45           | H            | 0.9           | 2.0                |





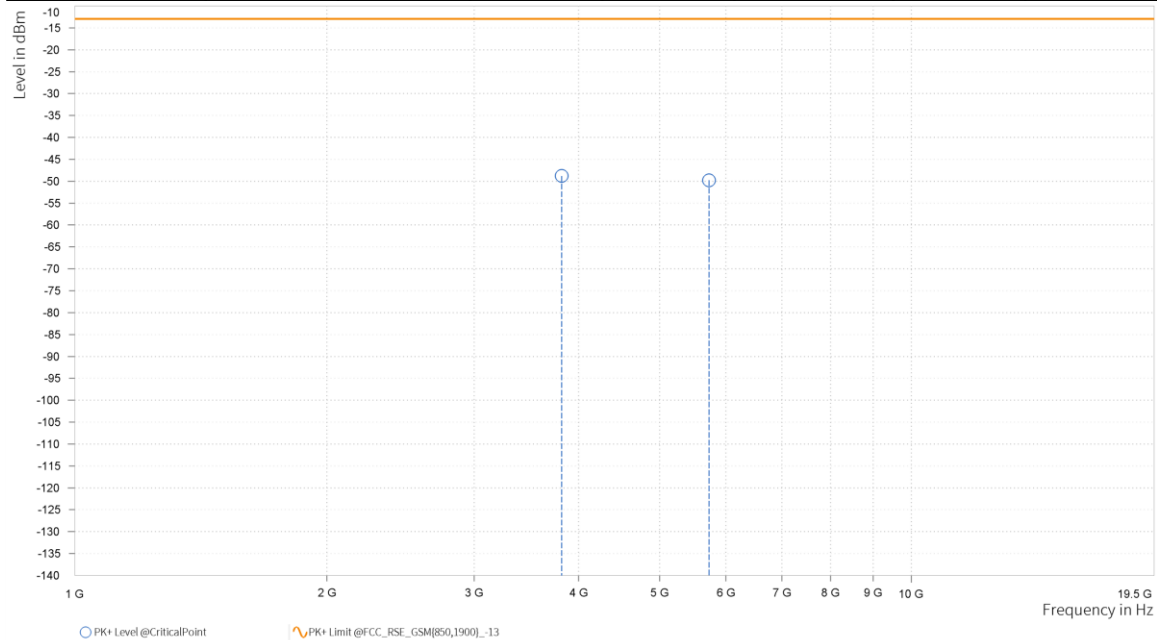
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 810  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,819.600       | -48.8           | -13.0           | 35.8            | 22.2            | V            | 1.0           | 1.0                |
| 4  | 5,729.400       | -49.77          | -13.0           | 36.77           | 24.92           | V            | 235.9         | 1.0                |





**BUREAU  
VERITAS**

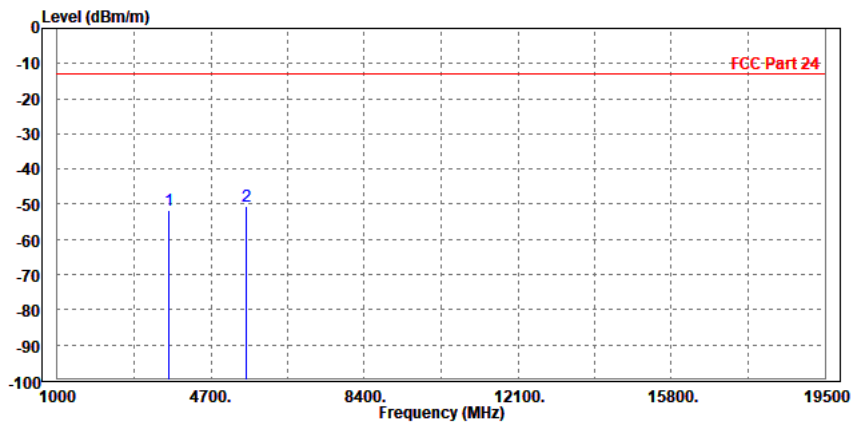
Test Report No.: PSU-NQN2406210109RF02

CDMA2000 BC1:

CH 25

|  |                 |                 |               |
|--|-----------------|-----------------|---------------|
| MODE   | TX channel 25   | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                                       | 23deg. C, 70%RH | INPUT POWER     | 120Vac 60HZ   |
| TESTED BY  | Jace Hu         |                 |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                 |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3701.000 | -51.73 | -60.13     | -13.00     | -38.73     | 8.40   | Peak   | Horizontal |
| 2 PP | 5553.000 | -50.48 | -62.28     | -13.00     | -37.48     | 11.80  | Peak   | Horizontal |



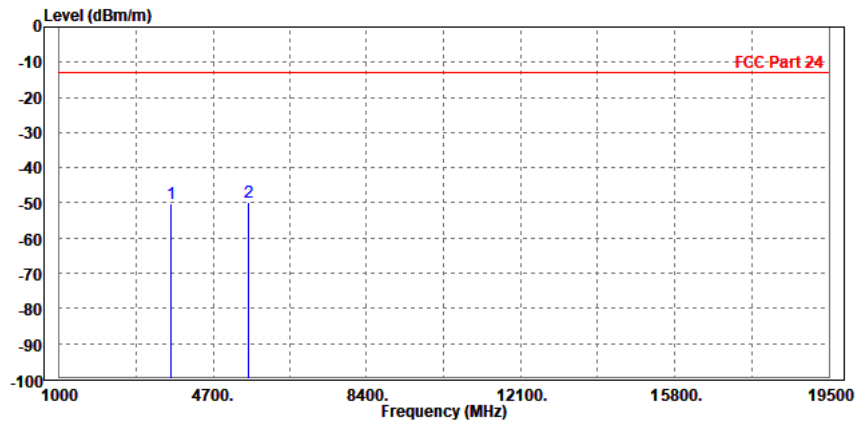


**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|  |                 |                        |               |
|--|-----------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 25   | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>   | Jace Hu         |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                 |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1    | 3702.000 | -50.08 | -58.71     | -13.00     | -37.08     | 8.63   | Peak   | Vertical  |
| 2 PP | 5551.000 | -49.68 | -62.01     | -13.00     | -36.68     | 12.33  | Peak   | Vertical  |





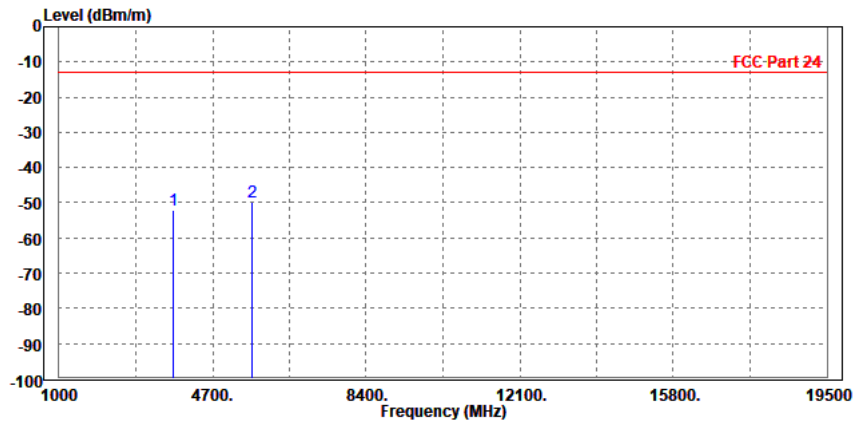
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

**CH 600**

|  |                 |                        |               |
|--|-----------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 600  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>   | Jace Hu         |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                 |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3756.500 | -52.25 | -60.60     | -13.00     | -39.25     | 8.35   | Peak   | Horizontal |
| 2 PP | 5640.000 | -49.80 | -61.61     | -13.00     | -36.80     | 11.81  | Peak   | Horizontal |





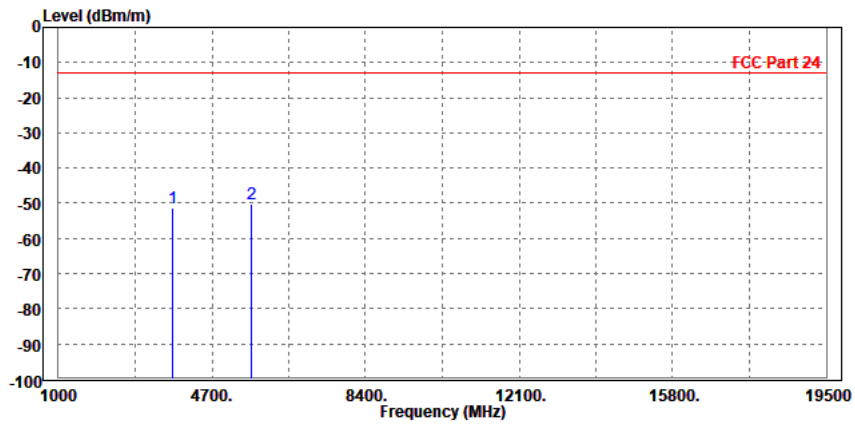


**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|  |                 |                        |               |
|--|-----------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 600  | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>   | Jace Hu         |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                 |                        |               |

|   | Freq        | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|---|-------------|--------|------------|------------|------------|--------|--------|-----------|
|   | MHz         | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 | 3756.500    | -51.38 | -60.01     | -13.00     | -38.38     | 8.63   | Peak   | Vertical  |
| 2 | PP 5640.000 | -50.06 | -62.38     | -13.00     | -37.06     | 12.32  | Peak   | Vertical  |





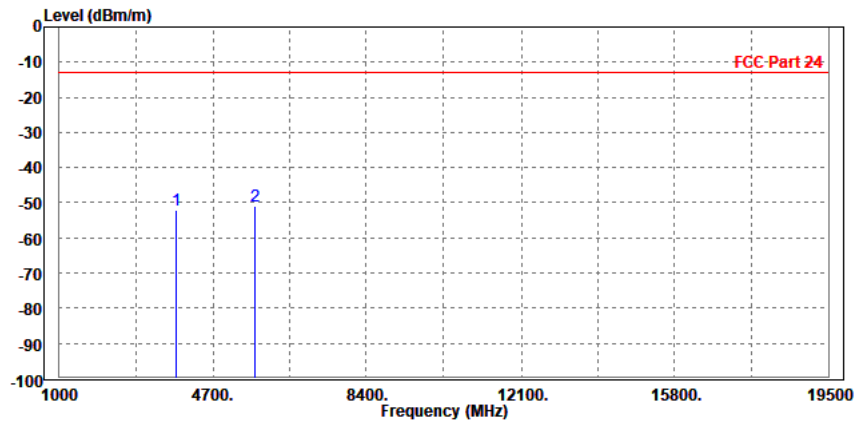
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

CH 1175

|  |                 |                        |               |
|--|-----------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 1175 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>   | Jace Hu         |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                 |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3817.500 | -51.94 | -60.25     | -13.00     | -38.94     | 8.31   | Peak   | Horizontal |
| 2 PP | 5717.500 | -51.10 | -62.92     | -13.00     | -38.10     | 11.82  | Peak   | Horizontal |



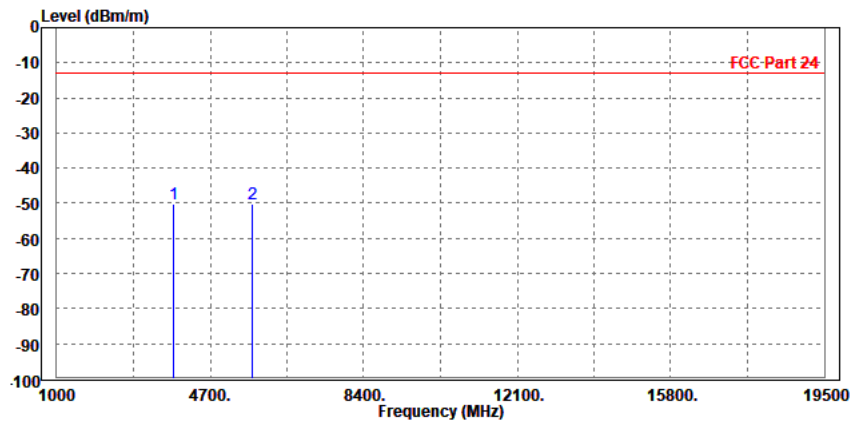


**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|  |                 |                        |               |
|--|-----------------|------------------------|---------------|
| <b>MODE</b>  | TX channel 1175 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                              | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>   | Jace Hu         |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b> |                 |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1    | 3812.000 | -50.32 | -58.95     | -13.00     | -37.32     | 8.63   | Peak   | Vertical  |
| 2 PP | 5725.250 | -50.12 | -62.43     | -13.00     | -37.12     | 12.31  | Peak   | Vertical  |





BUREAU VERITAS

Test Report No.: PSU-NQN2406210109RF02

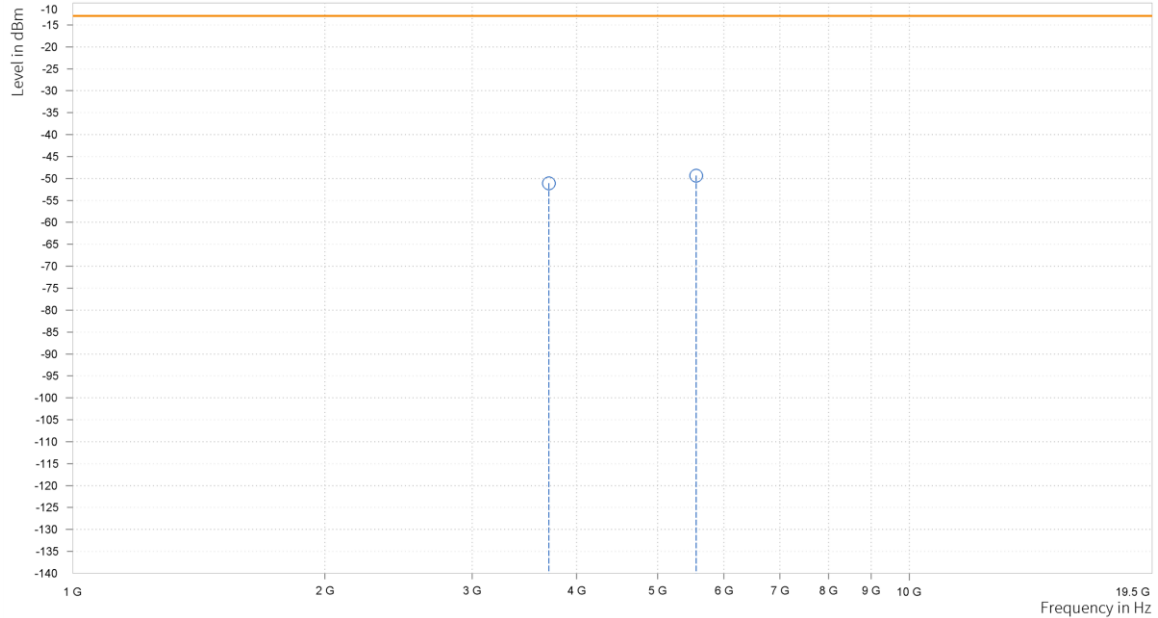
WCDMA Band II

CH 9262

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 9262 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,704.800       | -51.1           | -13.0           | 38.1            | 20.95           | H            | 97.6          | 1.0                |
| 4  | 5,557.200       | -49.36          | -13.0           | 36.36           | 23.75           | H            | 0.9           | 2.0                |





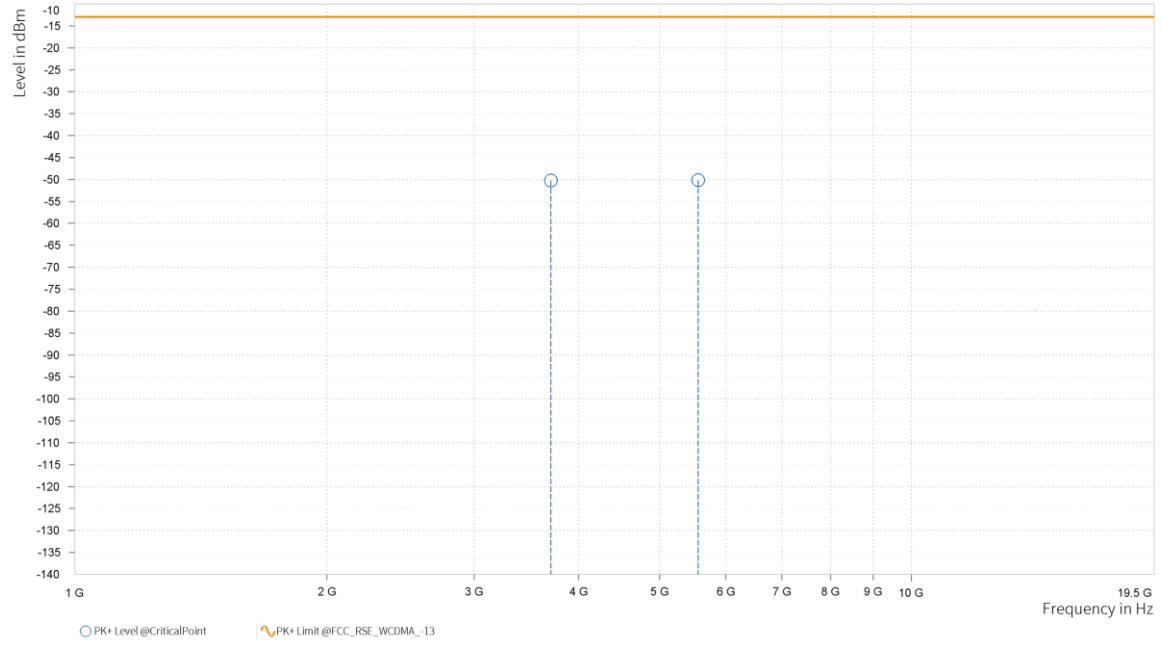
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 9262 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,704.800       | -50.22          | -13.0           | 37.22           | 21.55           | V            | 96.8          | 2.0                |
| 4  | 5,557.200       | -50.17          | -13.0           | 37.17           | 24.45           | V            | 1.0           | 1.0                |





**BUREAU  
VERITAS**

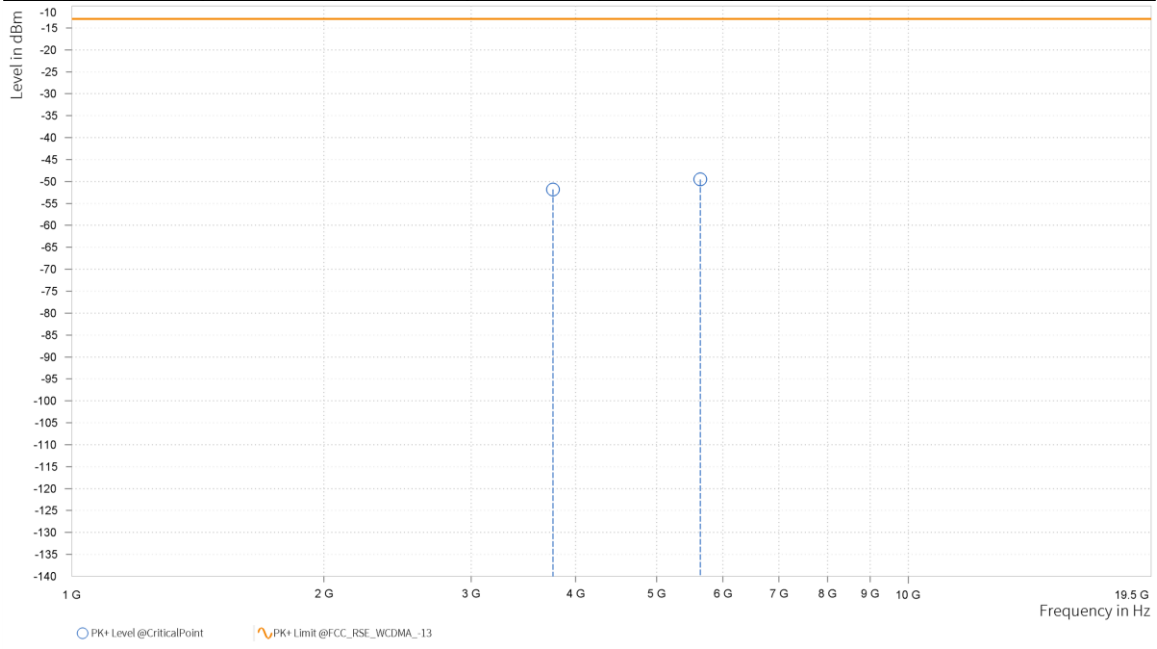
Test Report No.: PSU-NQN2406210109RF02

**CH 9400**

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 9400 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,760.000       | -51.82          | -13.0           | 38.82           | 21.19           | H            | 0.9           | 2.0                |
| 4  | 5,640.000       | -49.53          | -13.0           | 36.53           | 24.12           | H            | 0.9           | 2.0                |





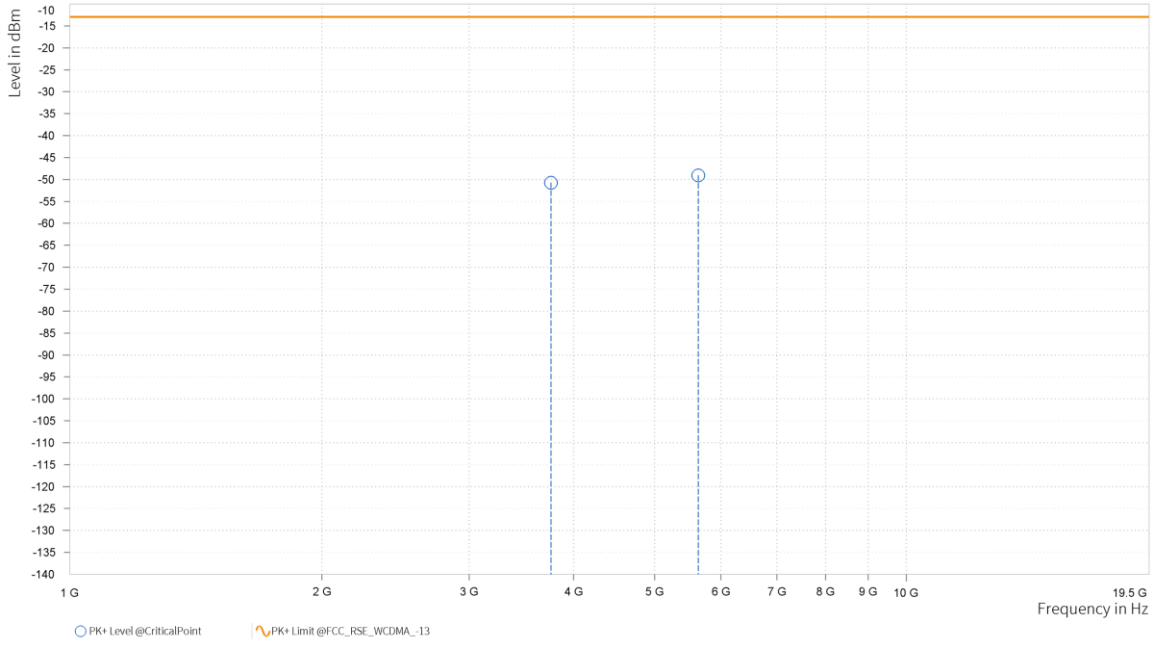
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 9400 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,760.000       | -50.74          | -13.0           | 37.74           | 21.68           | V            | 137.2         | 2.0                |
| 4  | 5,640.000       | -49.07          | -13.0           | 36.07           | 24.46           | V            | 1.0           | 2.0                |





**BUREAU  
VERITAS**

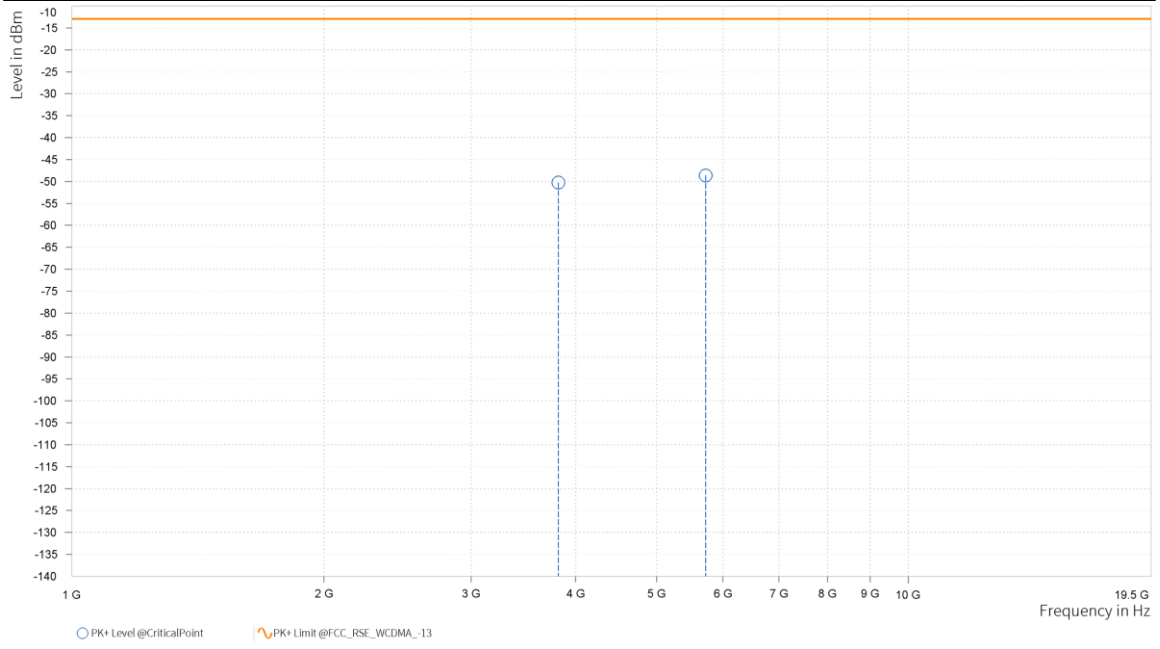
Test Report No.: PSU-NQN2406210109RF02

CH 9538

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 9538 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,815.200       | -50.27          | -13.0           | 37.27           | 21.82           | H            | 265.9         | 2.0                |
| 4  | 5,722.800       | -48.63          | -13.0           | 35.63           | 24.42           | H            | 359.0         | 1.0                |







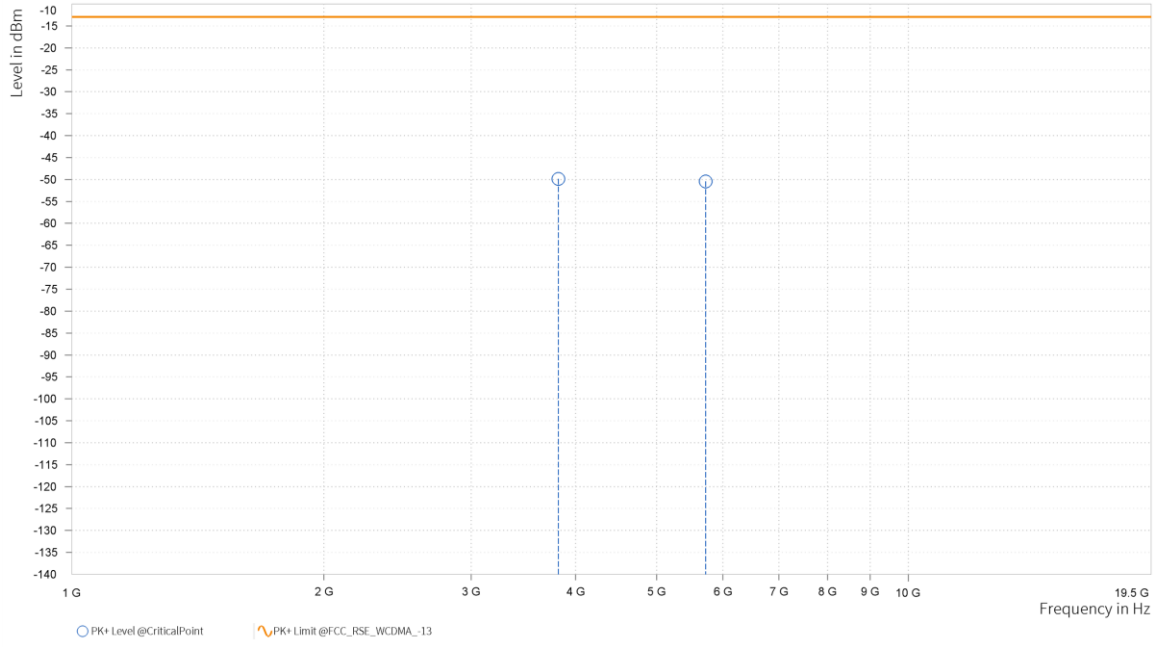
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                 |                        |               |
|---------------------------------|-----------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 9538 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu       |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,815.200       | -49.85          | -13.0           | 36.85           | 22.15           | V            | 359.0         | 2.0                |
| 4  | 5,722.800       | -50.43          | -13.0           | 37.43           | 24.88           | V            | 160.5         | 2.0                |





BUREAU VERITAS

Test Report No.: PSU-NQN2406210109RF02

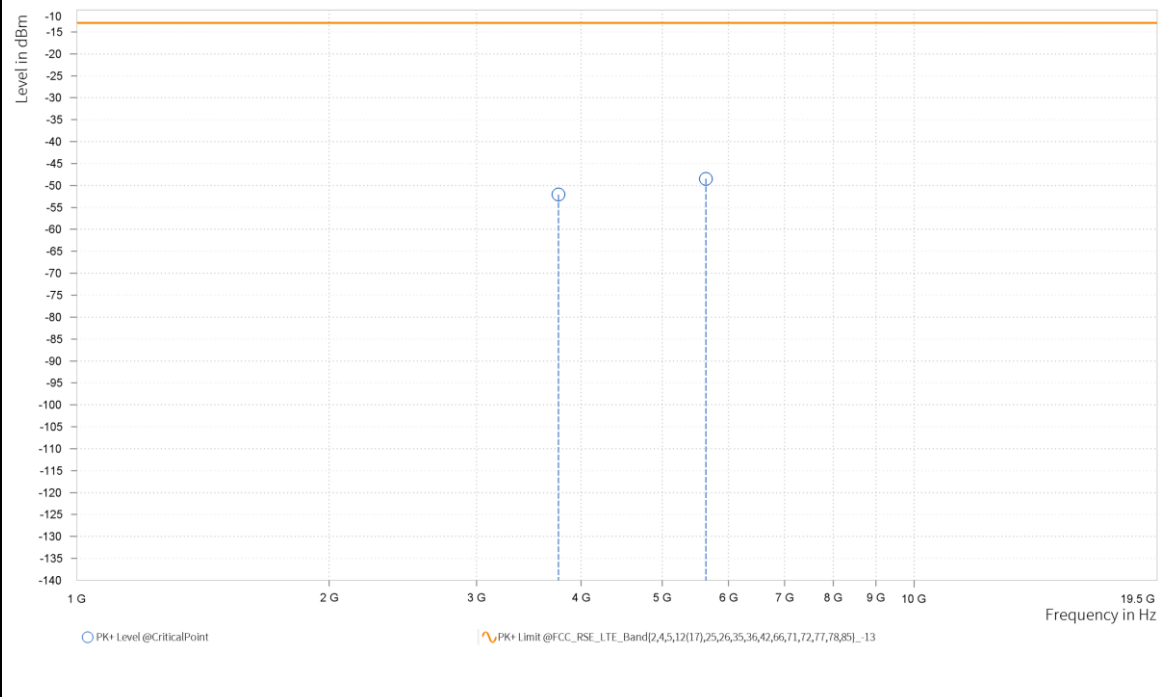
LTE Band 2

CHANNEL BANDWIDTH: 1.4MHz / QPSK

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,758.740       | -52.06          | -13.0           | 39.06           | 21.17           | H            | 299.2         | 1.0                |
| 4  | 5,638.110       | -48.49          | -13.0           | 35.49           | 24.11           | H            | 120.9         | 2.0                |





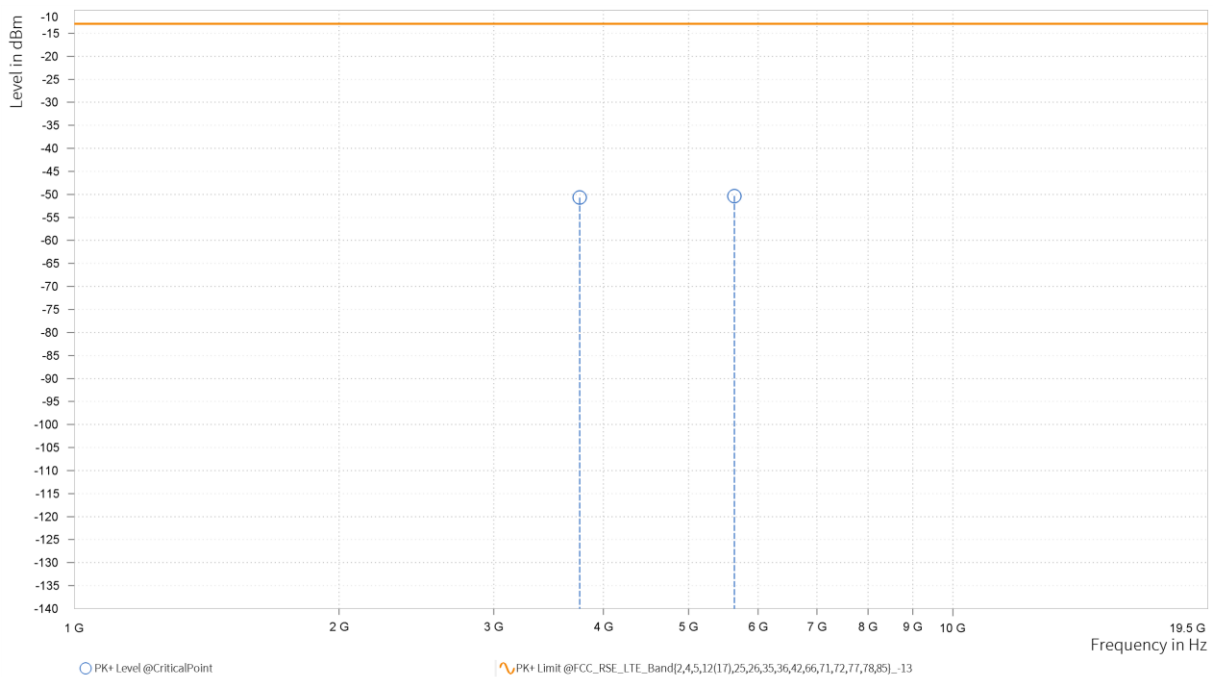
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,758.740       | -50.68          | -13.0           | 37.68           | 21.68           | V            | 185.3         | 1.0                |
| 4  | 5,638.110       | -50.36          | -13.0           | 37.36           | 24.45           | V            | 0.9           | 2.0                |





BUREAU VERITAS

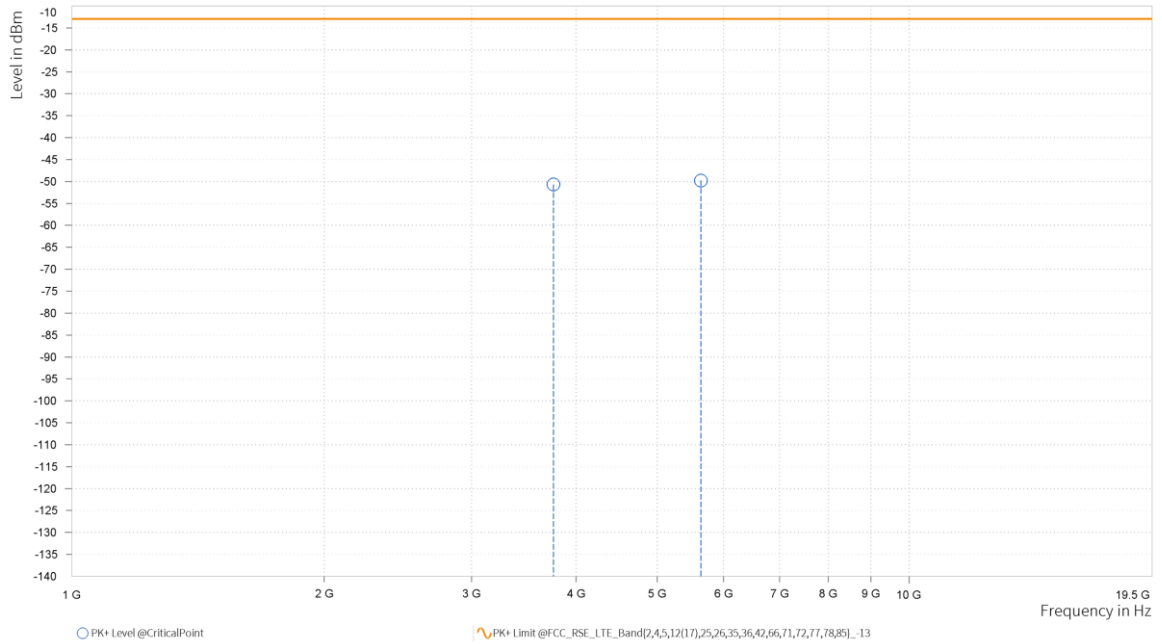
Test Report No.: PSU-NQN2406210109RF02

CHANNEL BANDWIDTH: 3MHz / QPSK

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,758.740       | -50.71          | -13.0           | 37.71           | 21.17           | H            | 297.8         | 1.0                |
| 4  | 5,638.110       | -49.78          | -13.0           | 36.78           | 24.11           | H            | 359.0         | 2.0                |





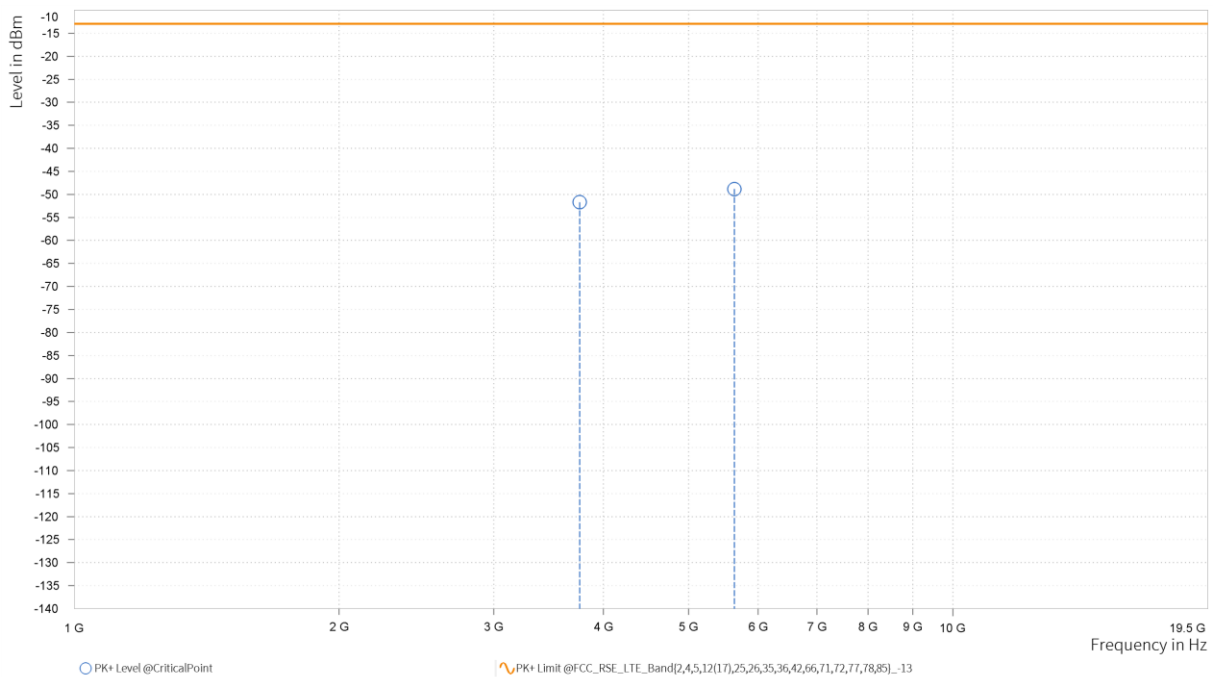
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,758.740       | -51.7           | -13.0           | 38.7            | 21.68           | V            | 176.8         | 2.0                |
| 4  | 5,638.110       | -48.82          | -13.0           | 35.82           | 24.45           | V            | 0.9           | 2.0                |





**BUREAU  
VERITAS**

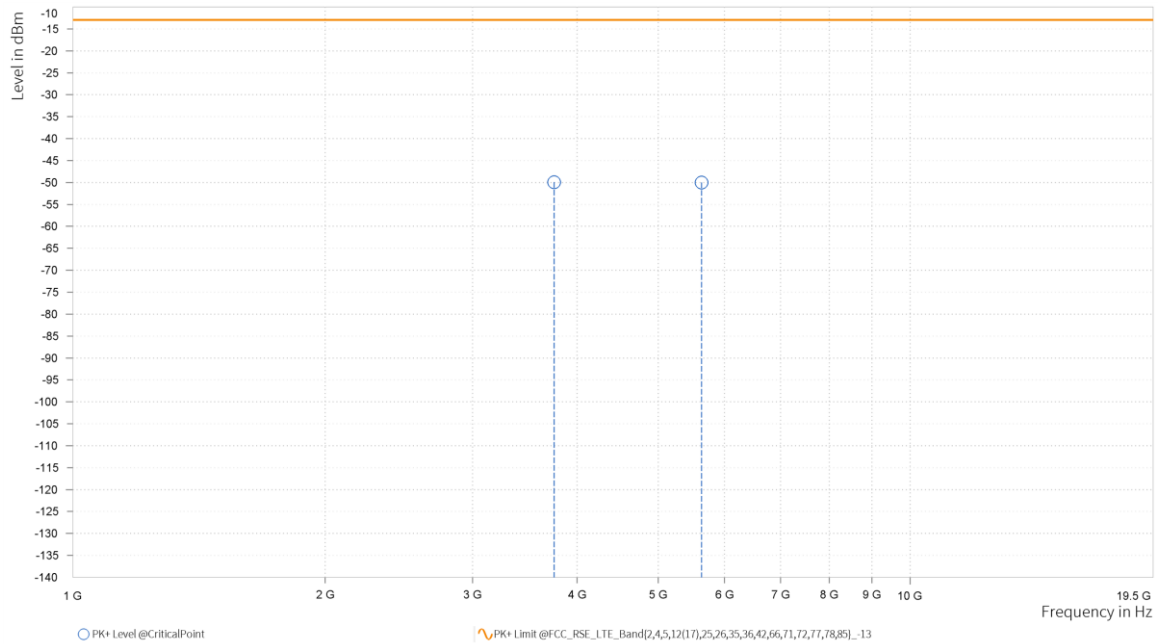
Test Report No.: PSU-NQN2406210109RF02

**CHANNEL BANDWIDTH: 5MHz / QPSK**

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,755.500       | -49.92          | -13.0           | 36.92           | 21.11           | H            | 16.9          | 2.0                |
| 4  | 5,633.250       | -50.0           | -13.0           | 37.0            | 24.1            | H            | 119.5         | 2.0                |





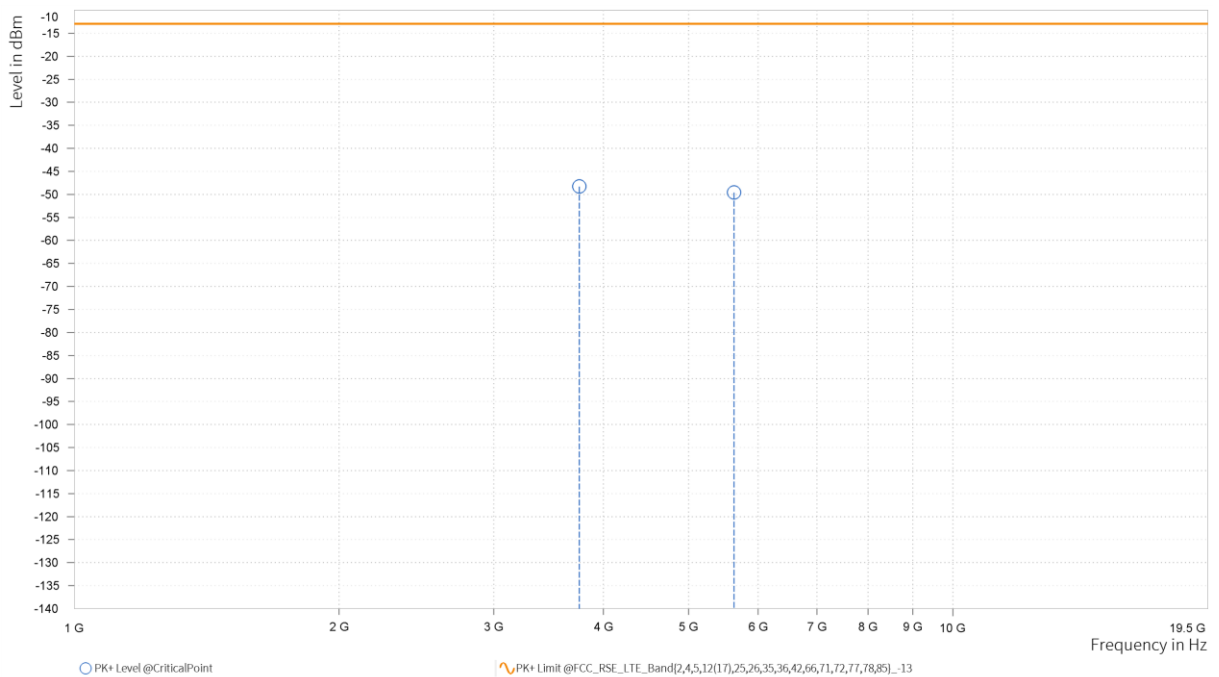
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,755.500       | -48.3           | -13.0           | 35.3            | 21.66           | V            | 125.1         | 2.0                |
| 4  | 5,633.250       | -49.61          | -13.0           | 36.61           | 24.43           | V            | 20.3          | 2.0                |





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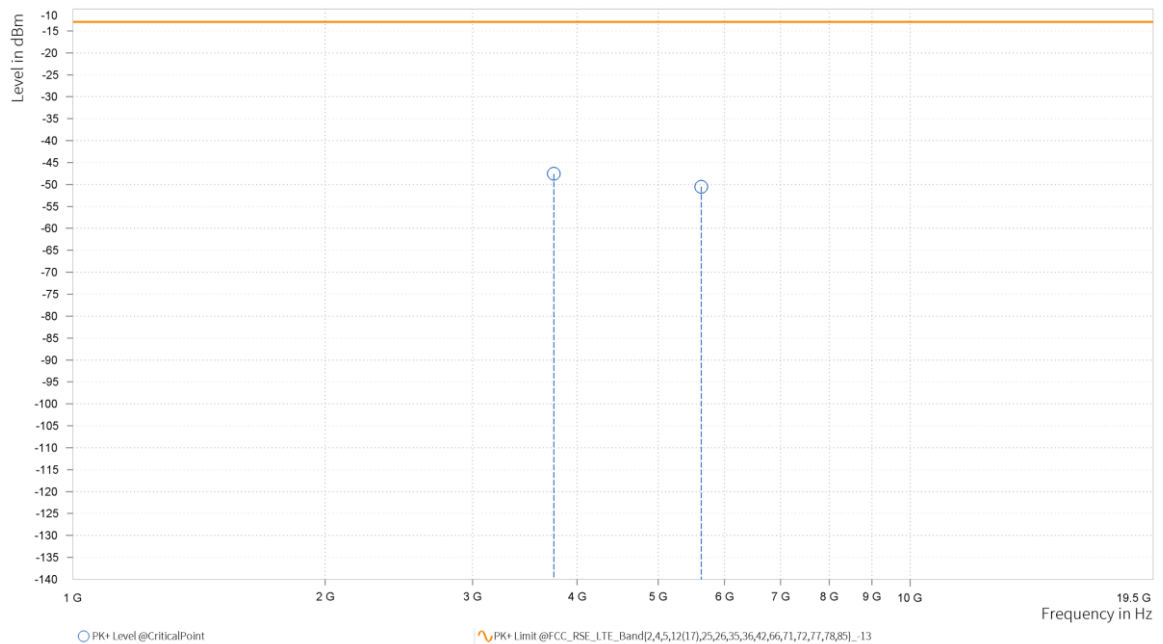
Test Report No.: PSU-NQN2406210109RF02

**CHANNEL BANDWIDTH: 10MHz / QPSK**

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,751.000       | -47.55          | -13.0           | 34.55           | 21.04           | H            | 24.6          | 2.0                |
| 4  | 5,626.500       | -50.5           | -13.0           | 37.5            | 24.07           | H            | 99.7          | 1.0                |







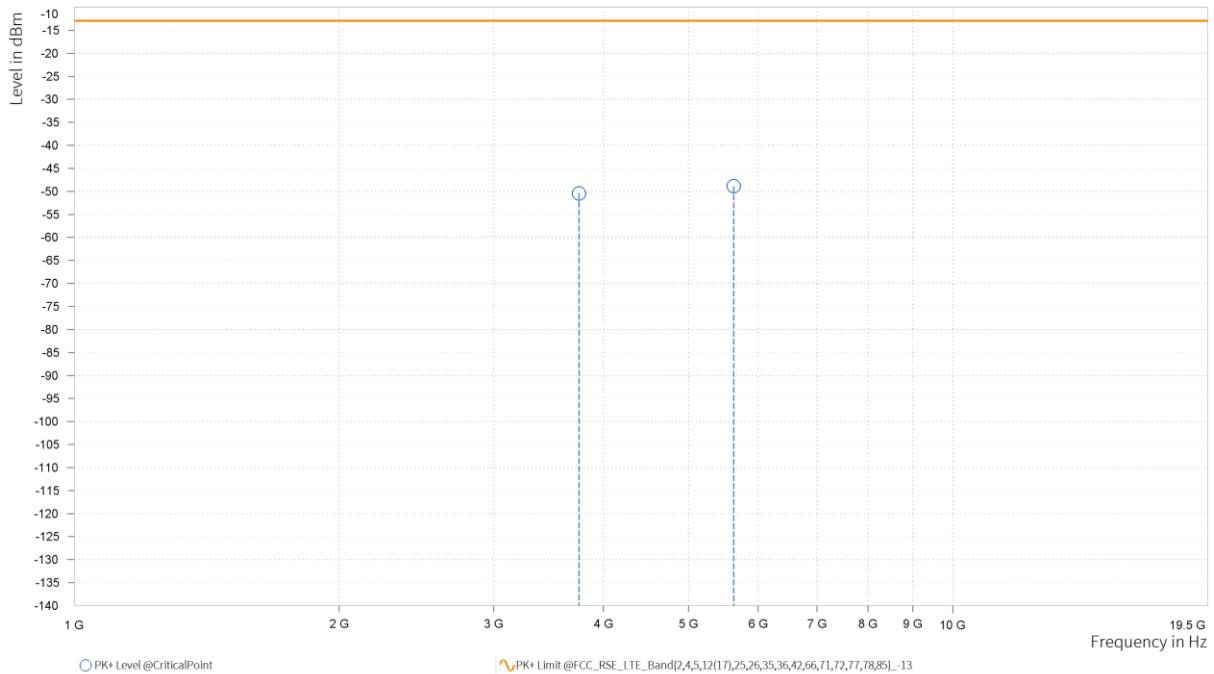
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,751.000       | -50.45          | -13.0           | 37.45           | 21.64           | V            | 1             | 1.0                |
| 4  | 5,626.500       | -48.89          | -13.0           | 35.89           | 24.43           | V            | 359           | 2.0                |



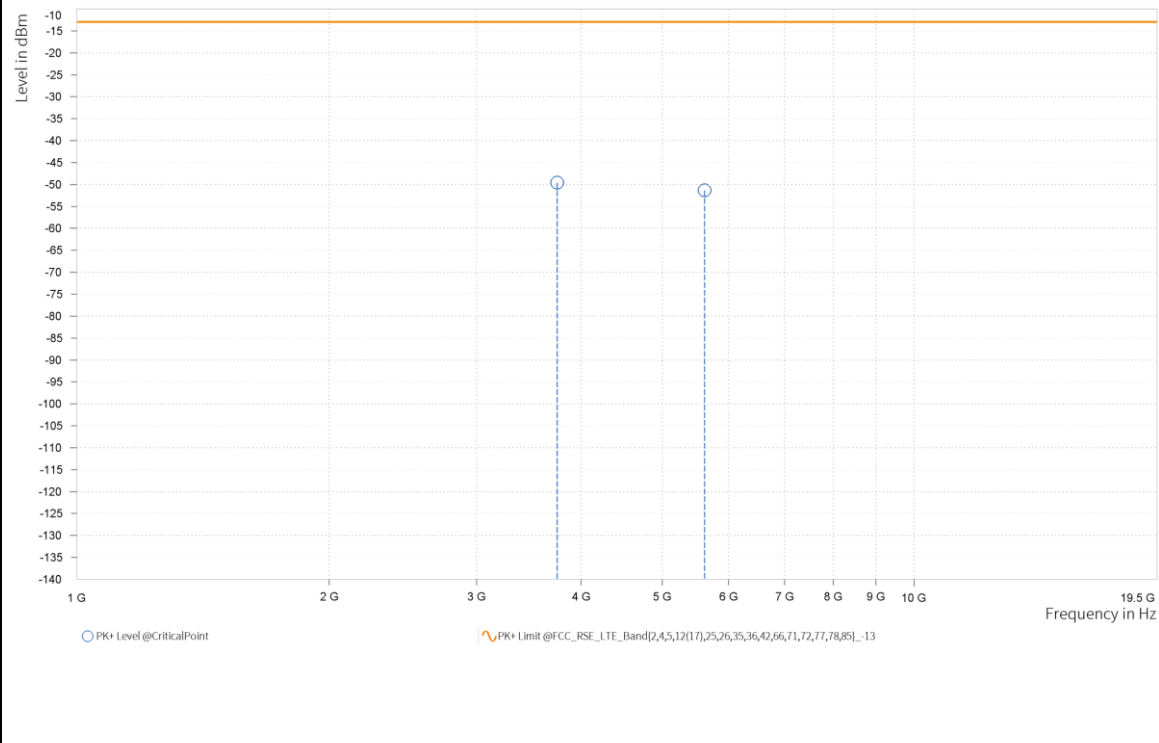


CHANNEL BANDWIDTH: 15MHz / QPSK

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,746.500       | -49.61          | -13.0           | 36.61           | 20.97           | H            | 164.0         | 2.0                |
| 4  | 5,619.750       | -51.34          | -13.0           | 38.34           | 24.03           | H            | 265.3         | 2.0                |





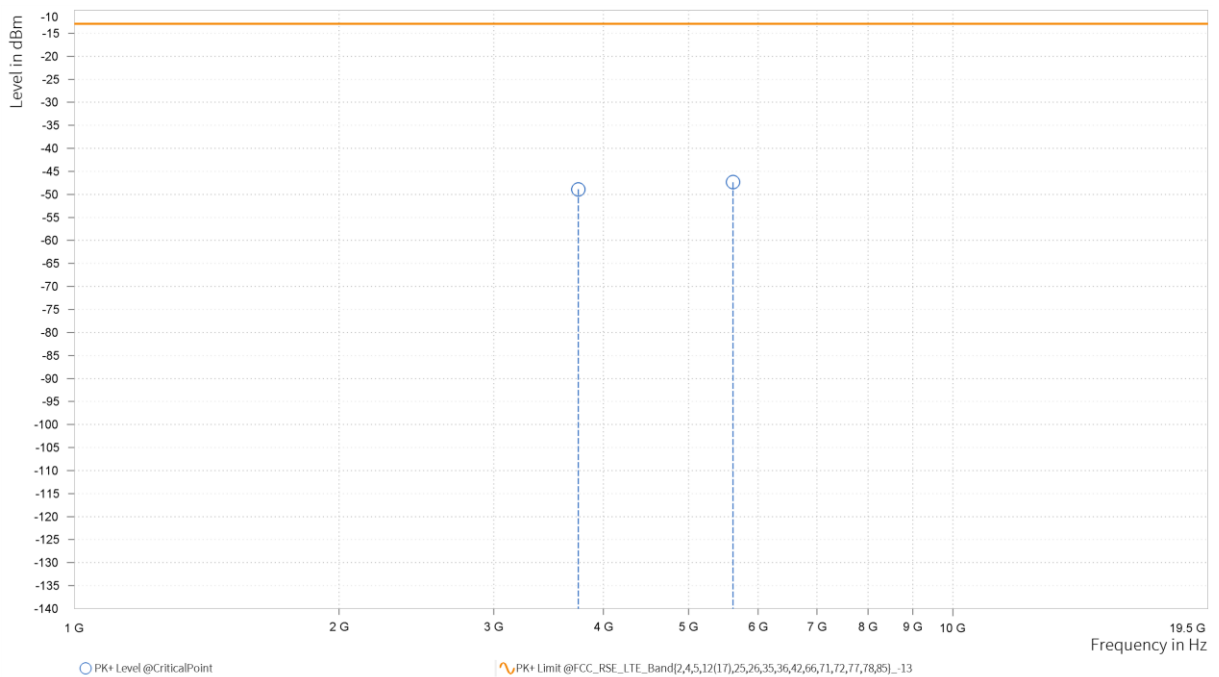
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,746.500       | -48.9           | -13.0           | 35.9            | 21.62           | V            | 262.4         | 2.0                |
| 4  | 5,619.750       | -47.33          | -13.0           | 34.33           | 24.43           | V            | 1.0           | 1.0                |





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VERITAS**

Test Report No.: PSU-NQN2406210109RF02

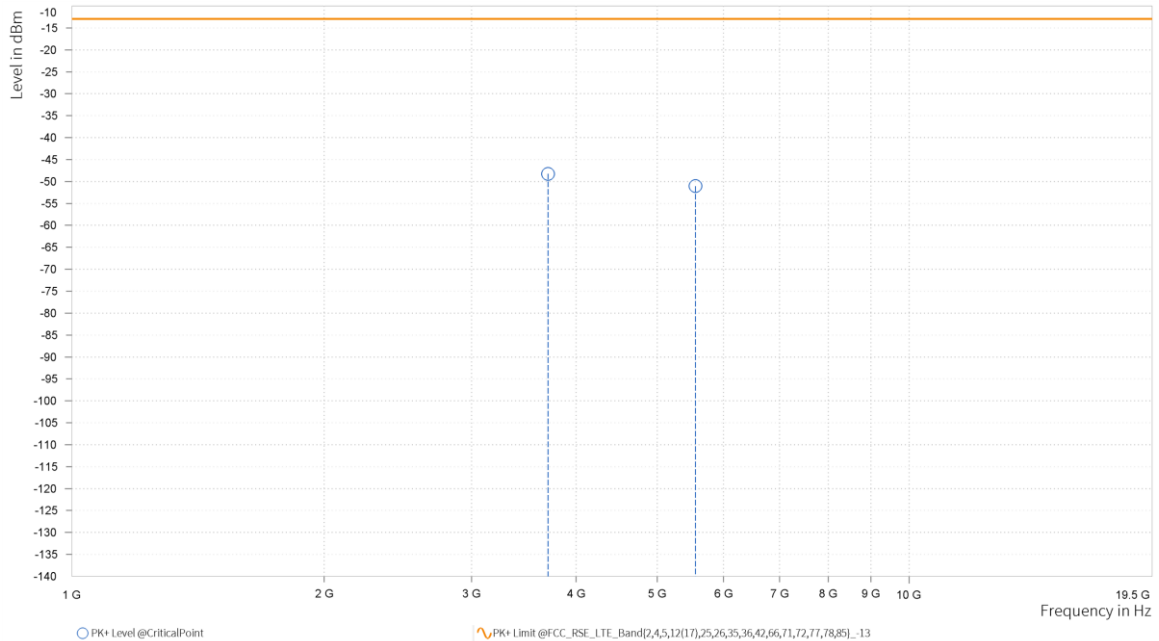
**CHANNEL BANDWIDTH: 20MHz / QPSK**

**CH18700**

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18700 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,702.000       | -48.24          | -13.0           | 35.24           | 20.97           | H            | 173.3         | 2.0                |
| 4  | 5,553.000       | -51.04          | -13.0           | 38.04           | 23.75           | H            | 242.6         | 1.0                |





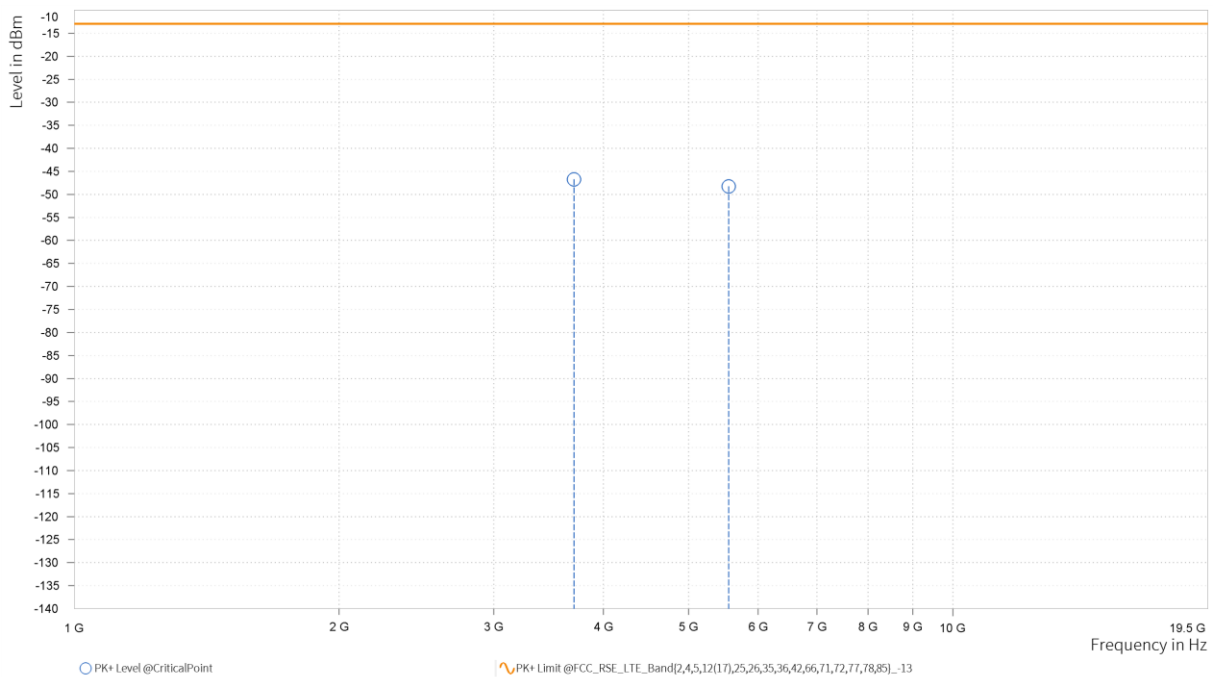
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18700 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,702.500       | -46.74          | -13.0           | 33.74           | 21.56           | V            | 0.9           | 2.0                |
| 4  | 5,553.000       | -48.27          | -13.0           | 35.27           | 24.45           | V            | 359.0         | 1.0                |





**BUREAU  
VERITAS**

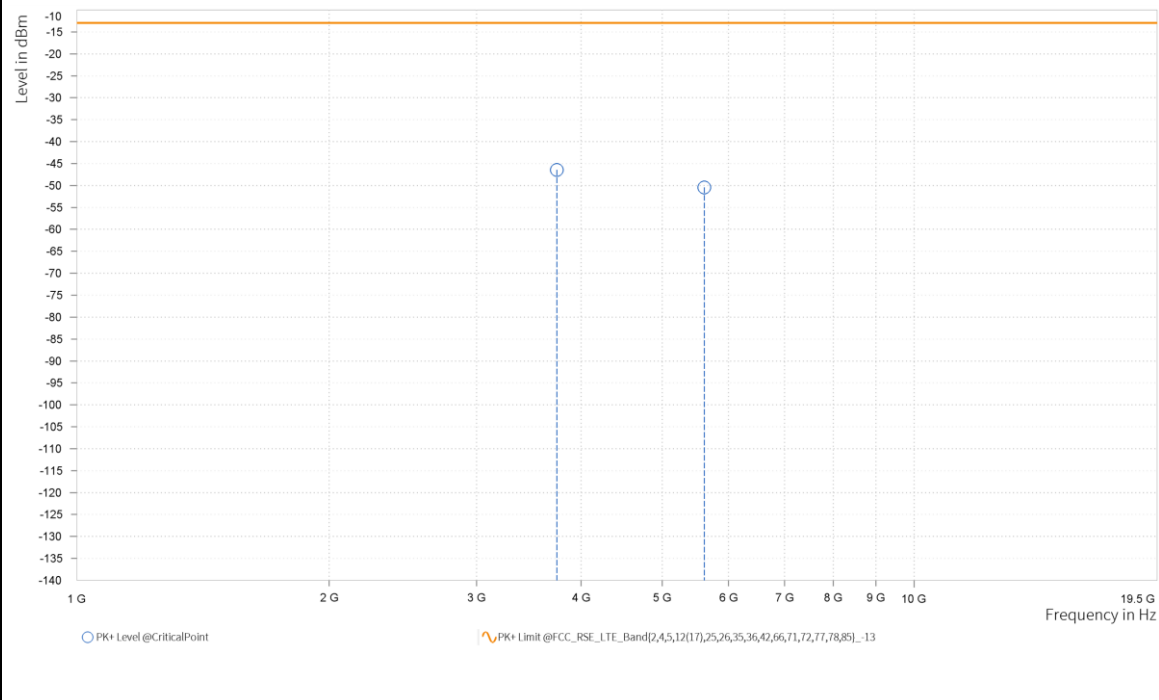
Test Report No.: PSU-NQN2406210109RF02

**CH18900**

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,742.000       | -46.45          | -13.0           | 33.45           | 20.95           | H            | 154.9         | 2.0                |
| 4  | 5,613.000       | -50.44          | -13.0           | 37.44           | 23.99           | H            | 0.9           | 2.0                |





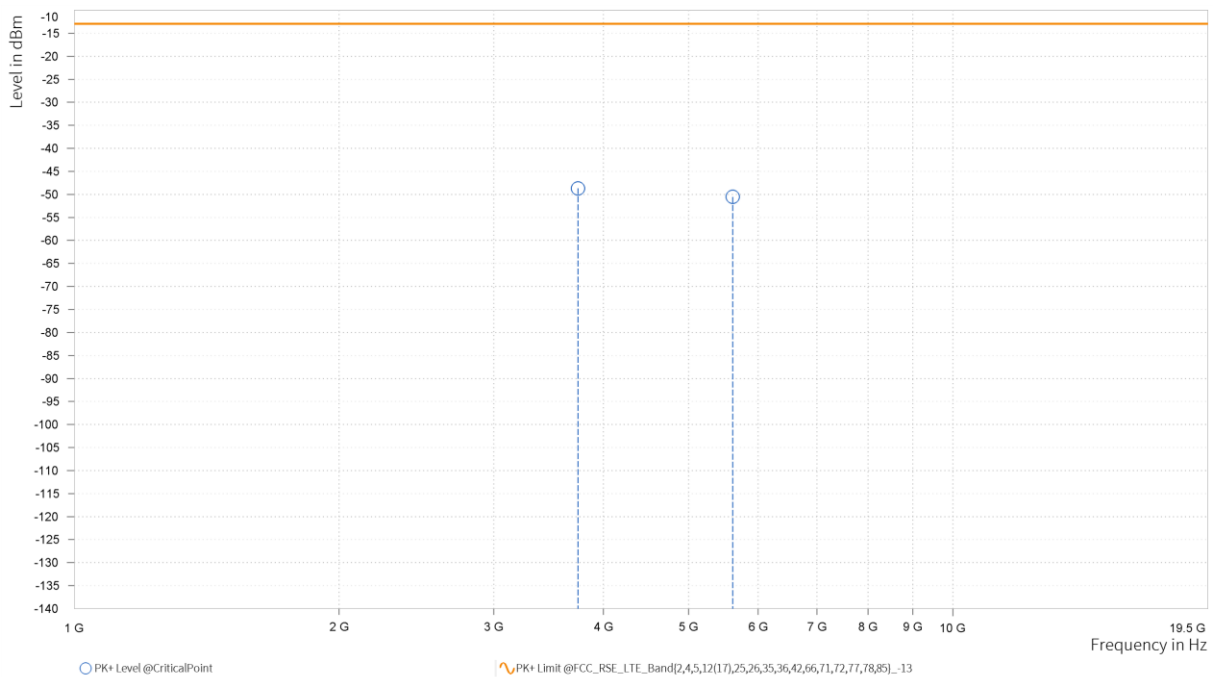
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,742.000       | -48.71          | -13.0           | 35.71           | 21.6            | V            | 184.6         | 1.0                |
| 4  | 5,613.000       | -50.54          | -13.0           | 37.54           | 24.43           | V            | 359.1         | 1.0                |





**BUREAU  
VERITAS**

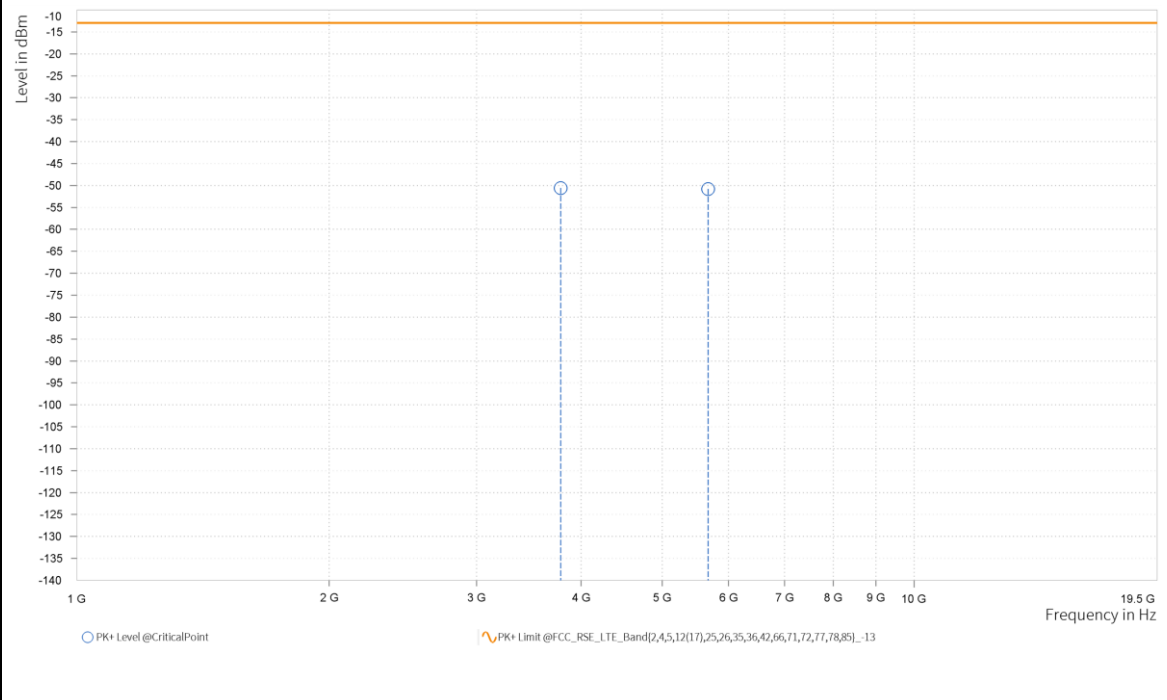
Test Report No.: PSU-NQN2406210109RF02

**CH19100**

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 19100 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,782.000       | -50.57          | -13.0           | 37.57           | 21.58           | H            | 251.0         | 1.0                |
| 4  | 5,673.000       | -50.79          | -13.0           | 37.79           | 24.2            | H            | 154.2         | 1.0                |







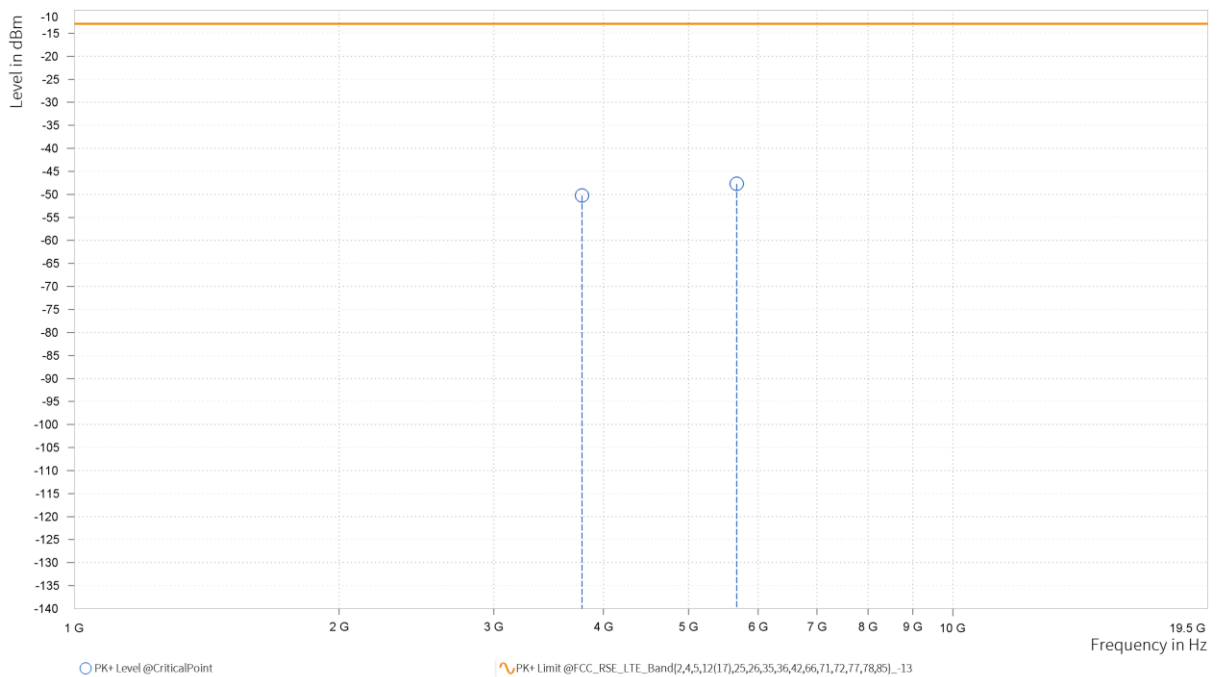
**BUREAU  
VERITAS**

Test Report No.: PSU-NQN2406210109RF02

|                                 |                  |                        |               |
|---------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                     | TX channel 19100 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b> | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | 120Vac 60HZ   |
| <b>TESTED BY</b>                | Hanwen Xu        |                        |               |

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

| Rg | Frequency [MHz] | PK+ Level [dBm] | PK+ Limit [dBm] | PK+ Margin [dB] | Correction [dB] | Polarization | Azimuth [deg] | Antenna Height [m] |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|---------------|--------------------|
| 4  | 3,782.000       | -50.25          | -13.0           | 37.25           | 21.78           | V            | 101.8         | 1.0                |
| 4  | 5,673.000       | -47.7           | -13.0           | 34.7            | 24.6            | V            | 1.0           | 1.0                |



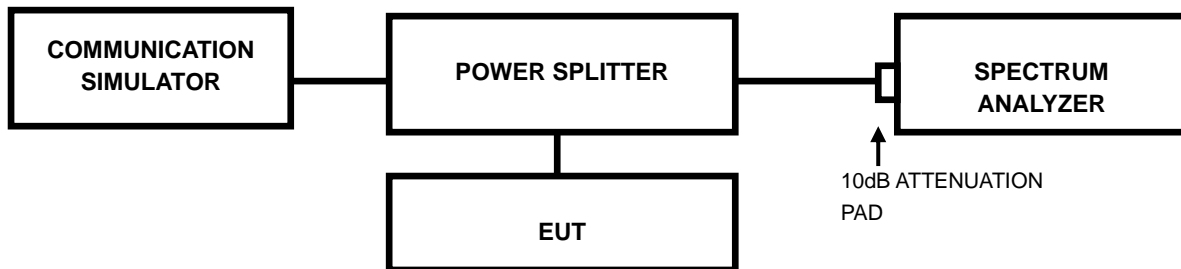


### 3.7 PEAK TO AVERAGE RATIO

#### 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%.



Test Report No.: PSU-NQN2406210109RF02

### 3.7.4 TEST RESULTS

Please Refer to Appendix Of this test report.



Test Report No.: PSU-NQN2406210109RF02

## 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

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



Test Report No.: PSU-NQN2406210109RF02

## **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

### GSM 1900

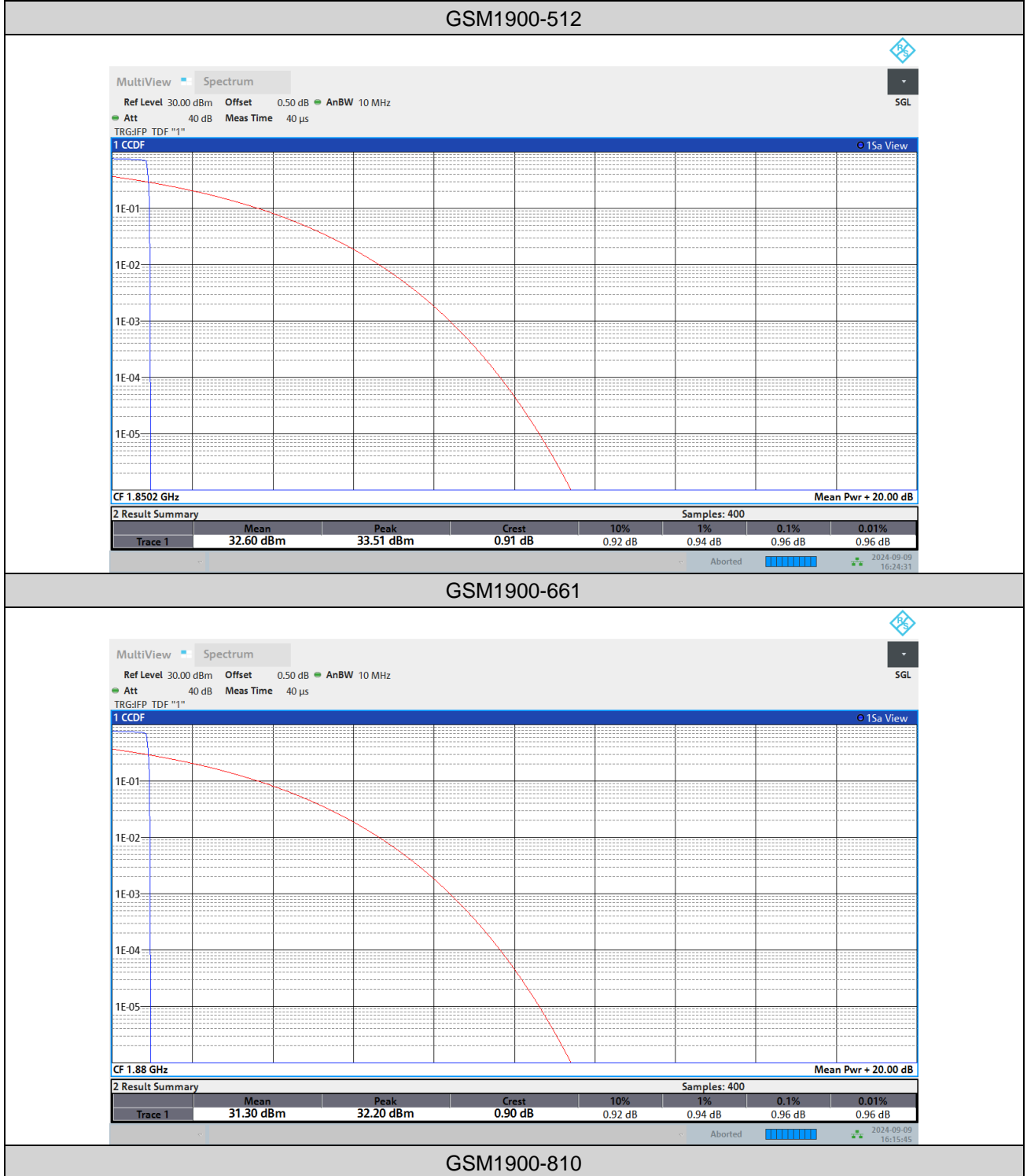
#### PEAK-TO-AVERAGE RATIO(CCDF)

##### Test Result

| Band      | Channel | Result(dB) | Limit(dB) | Verdict |
|-----------|---------|------------|-----------|---------|
| GSM1900   | 512     | 0.96       | 13        | PASS    |
| GSM1900   | 661     | 0.96       | 13        | PASS    |
| GSM1900   | 810     | 1.04       | 13        | PASS    |
| EGPRS1900 | 512     | 1.84       | 13        | PASS    |
| EGPRS1900 | 661     | 2.36       | 13        | PASS    |
| EGPRS1900 | 810     | 2.36       | 13        | PASS    |



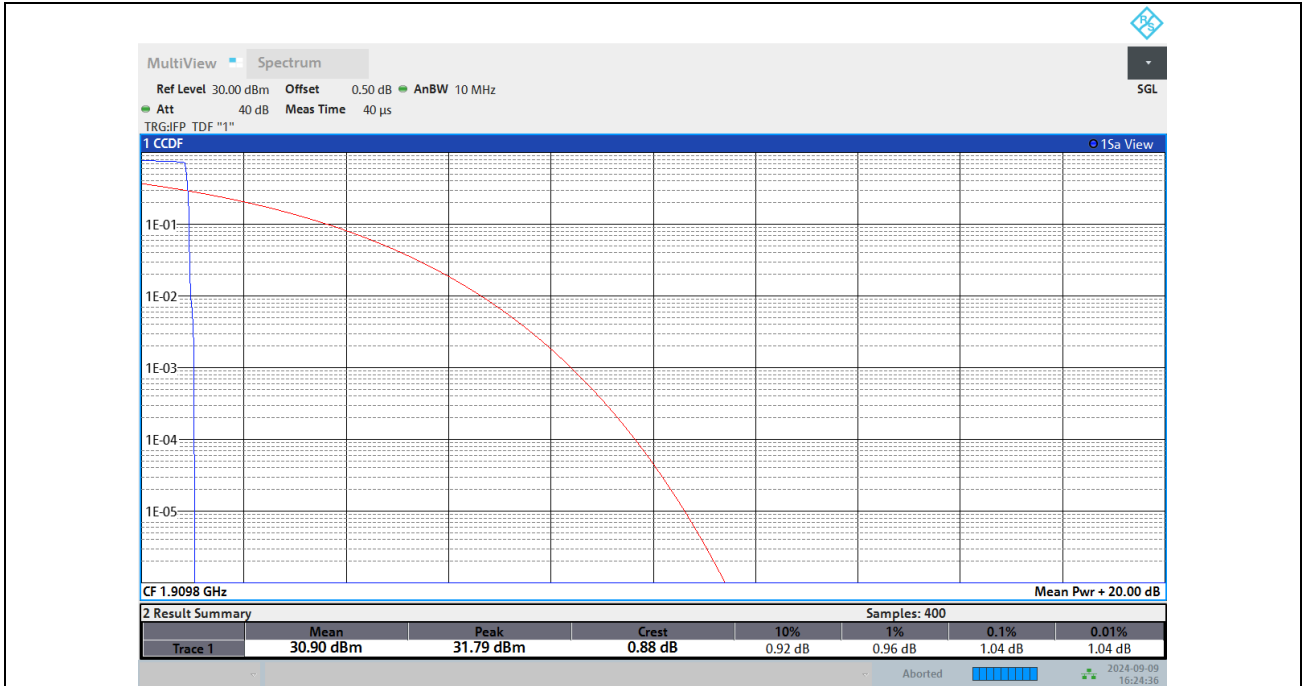
### Test Graphs



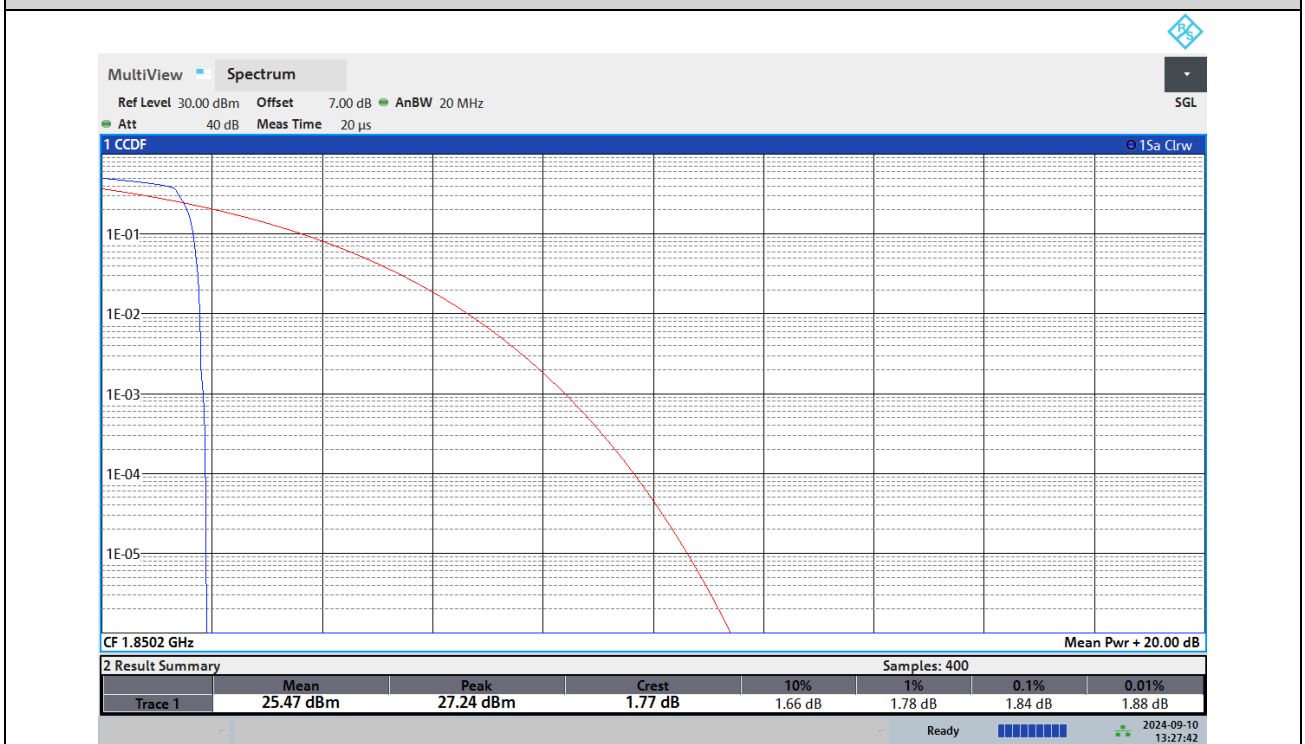


BUREAU VERITAS

Test Report No.: PSU-NQN2406210109RF02



EGPRS1900-512



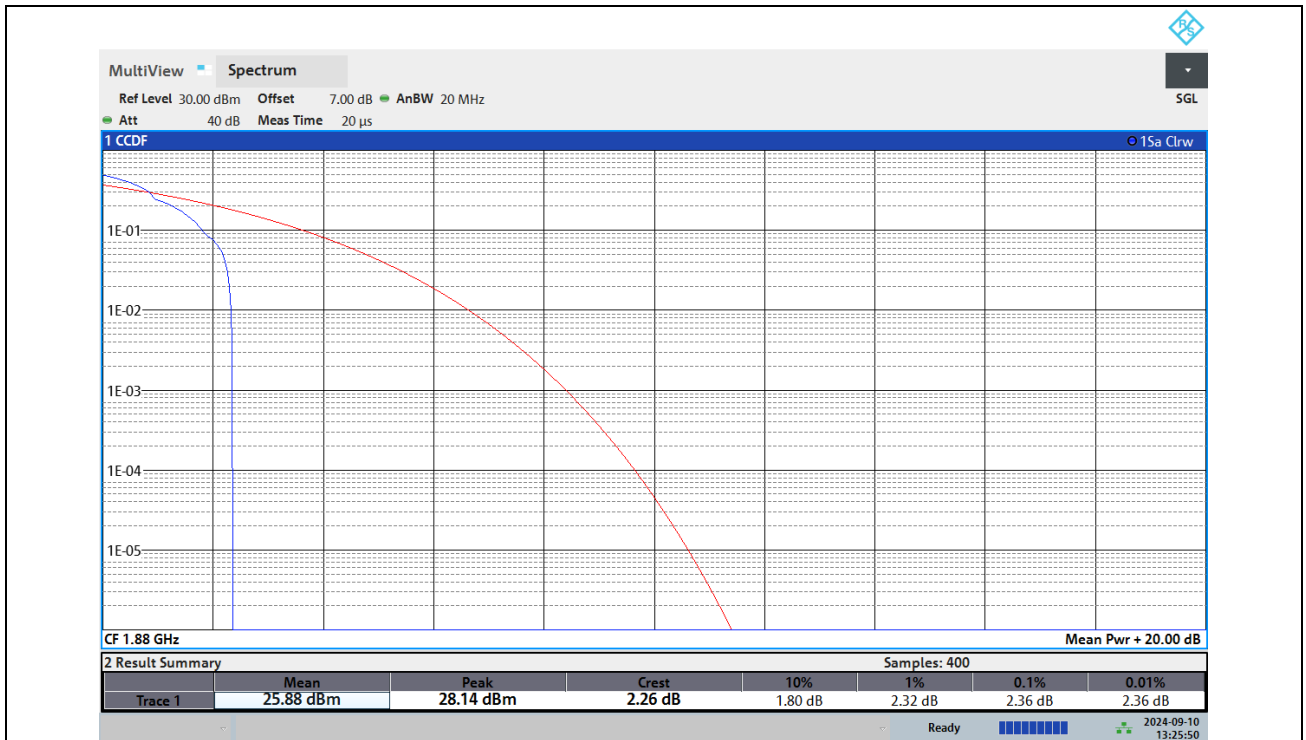
EGPRS1900-661



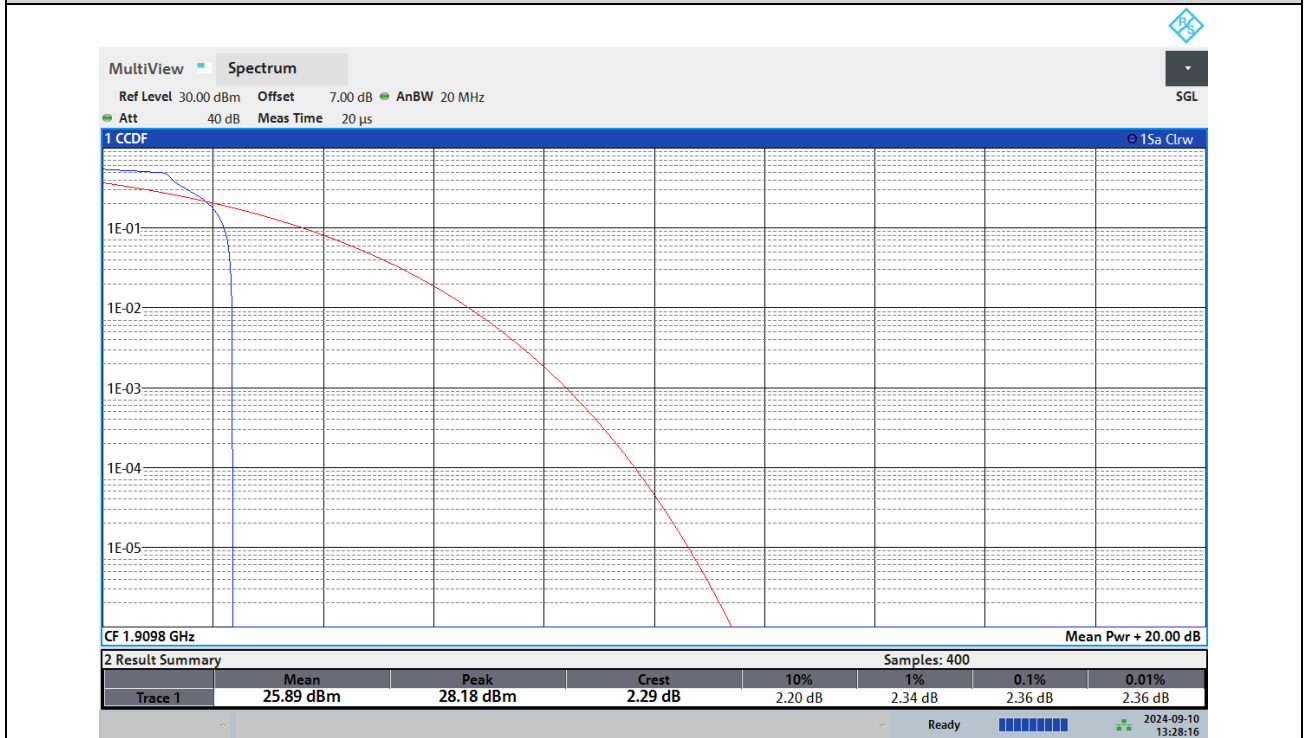


BUREAU VERITAS

Test Report No.: PSU-NQN2406210109RF02



EGPRS1900-810





## 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

### Test Result

| Band      | Channel | Occupied Bandwidth (kHz) | 26dB Bandwidth (kHz) | Verdict |
|-----------|---------|--------------------------|----------------------|---------|
| GSM1900   | 512     | 245.780                  | 319.18               | PASS    |
| GSM1900   | 661     | 245.218                  | 318.68               | PASS    |
| GSM1900   | 810     | 244.991                  | 315.18               | PASS    |
| EGPRS1900 | 512     | 245.117                  | 306.69               | PASS    |
| EGPRS1900 | 661     | 241.630                  | 312.69               | PASS    |
| EGPRS1900 | 810     | 245.815                  | 312.19               | PASS    |



BUREAU VERITAS

Test Report No.: PSU-NQN2406210109RF02

### Test Graphs

### Occupied Bandwidth

