

## FCC Test Report (ENDC: n2 + LTE B5/B12/B66)

**Report No.:** RFBBQZ-WTW-P21031117-1

**FCC ID:** PY320400515

**Test Model:** MR5200

**Received Date:** Mar. 31, 2021

**Test Date:** Apr. 27 ~ May 04, 2021

**Issued Date:** May 17, 2021

**Applicant and Manufacturer:** NETGEAR INC.

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

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**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City  
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**FCC Registration /** 788550 / TW0003  
**Designation Number:**



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## Table of Contents

|                                                             |           |
|-------------------------------------------------------------|-----------|
| <b>Release Control Record</b>                               | <b>4</b>  |
| <b>1 Certificate of Conformity</b>                          | <b>5</b>  |
| <b>2 Summary of Test Results</b>                            | <b>6</b>  |
| 2.1 Measurement Uncertainty                                 | 7         |
| 2.2 Test Site and Instruments                               | 8         |
| <b>3 General Information</b>                                | <b>10</b> |
| 3.1 General Description of EUT                              | 10        |
| 3.2 Configuration of System under Test                      | 15        |
| 3.2.1 Description of Support Units                          | 15        |
| 3.3 Test Mode Applicability and Tested Channel Detail       | 16        |
| 3.4 EUT Operating Conditions                                | 22        |
| 3.5 General Description of Applied Standards and References | 22        |
| <b>4 Test Types and Results</b>                             | <b>23</b> |
| 4.1 Output Power Measurement                                | 23        |
| 4.1.1 Limits of Output Power Measurement                    | 23        |
| 4.1.2 Test Procedures                                       | 24        |
| 4.1.3 Test Setup                                            | 25        |
| 4.1.4 Test Results                                          | 26        |
| 4.2 Modulation Characteristics Measurement                  | 104       |
| 4.2.1 Limits of Modulation Characteristics                  | 104       |
| 4.2.2 Test Procedure                                        | 104       |
| 4.2.3 Test Setup                                            | 104       |
| 4.2.4 Test Results                                          | 105       |
| 4.3 Frequency Stability Measurement                         | 106       |
| 4.3.1 Limits of Frequency Stability Measurement             | 106       |
| 4.3.2 Test Procedure                                        | 106       |
| 4.3.3 Test Instruments                                      | 106       |
| 4.3.4 Conducted Setup                                       | 106       |
| 4.3.5 Test Results                                          | 107       |
| 4.4 Occupied Bandwidth Measurement                          | 111       |
| 4.4.1 Test Procedure                                        | 111       |
| 4.4.2 Test Setup                                            | 111       |
| 4.4.3 Test Result                                           | 112       |
| 4.5 Band Edge Measurement                                   | 116       |
| 4.5.1 Limits of Band Edge Measurement                       | 116       |
| 4.5.2 Test Setup                                            | 116       |
| 4.5.3 Test Procedures                                       | 116       |
| 4.5.4 Test Results                                          | 117       |
| 4.6 Peak to Average Ratio                                   | 121       |
| 4.6.1 Limits of Peak to Average Ratio Measurement           | 121       |
| 4.6.2 Test Setup                                            | 121       |
| 4.6.3 Test Procedures                                       | 121       |
| 4.6.4 Test Results                                          | 122       |
| 4.7 Conducted Spurious Emissions                            | 124       |
| 4.7.1 Limits of Conducted Spurious Emissions Measurement    | 124       |
| 4.7.2 Test Setup                                            | 124       |
| 4.7.3 Test Procedure                                        | 124       |
| 4.7.4 Test Results                                          | 125       |
| 4.8 Radiated Emission Measurement                           | 129       |
| 4.8.1 Limits of Radiated Emission Measurement               | 129       |
| 4.8.2 Test Procedure                                        | 129       |
| 4.8.3 Deviation from Test Standard                          | 129       |
| 4.8.4 Test Setup                                            | 130       |

|                                                                 |            |
|-----------------------------------------------------------------|------------|
| 4.8.5 Test Results .....                                        | 131        |
| <b>5 Pictures of Test Arrangements .....</b>                    | <b>191</b> |
| <b>Appendix – Information of the Testing Laboratories .....</b> | <b>192</b> |

### Release Control Record

| Issue No.              | Description      | Date Issued  |
|------------------------|------------------|--------------|
| RFBBQZ-WTW-P21031117-1 | Original release | May 17, 2021 |

## 1 Certificate of Conformity

**Product:** 5G MHS Travel Router

**Brand:** NETGEAR

**Test Model:** MR5200

**Sample Status:** Engineering sample

**Applicant:** NETGEAR INC.

**Test Date:** Apr. 27 ~ May 04, 2021

**Standards:** FCC Part 22, Subpart H  
FCC Part 24, Subpart E  
FCC Part 27, Subpart C, H, L

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :** Pettie Chen , **Date:** May 17, 2021  
Pettie Chen / Senior Specialist

**Approved by :** Bruce Chen , **Date:** May 17, 2021  
Bruce Chen / Senior Project Engineer

## 2 Summary of Test Results

For n2

| Applied Standard: FCC Part 24 & Part 2 |                                        |        |                                                                                   |
|----------------------------------------|----------------------------------------|--------|-----------------------------------------------------------------------------------|
| FCC Clause                             | Test Item                              | Result | Remarks                                                                           |
| 2.1046<br>24.232                       | Effective Isotropically Radiated Power | Pass   | Meet the requirement of limit.                                                    |
| 2.1046<br>24.232<br>(d)                | Peak To Average Ratio                  | Pass   | Meet the requirement of limit.                                                    |
| 2.1047                                 | Modulation Characteristics             | Pass   | Meet the requirement                                                              |
| 2.1055<br>24.235                       | Frequency Stability                    | Pass   | Meet the requirement of limit.                                                    |
| 2.1049                                 | Occupied Bandwidth                     | Pass   | Meet the requirement of limit.                                                    |
| 24.238                                 | Band Edge Measurements                 | Pass   | Meet the requirement of limit.                                                    |
| 2.1051<br>24.238                       | Conducted Spurious Emissions           | Pass   | Meet the requirement of limit.                                                    |
| 2.1053<br>24.238                       | Radiated Spurious Emissions            | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -33.70dB at 83.42MHz. |

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 5

| Applied Standard: FCC Part 22 & Part 2 |                              |        |                                                                                   |
|----------------------------------------|------------------------------|--------|-----------------------------------------------------------------------------------|
| FCC Clause                             | Test Item                    | Result | Remarks                                                                           |
| 2.1046<br>22.913<br>(a)                | Effective radiated power     | Pass   | Meet the requirement of limit.                                                    |
| 2.1047                                 | Modulation Characteristics   | Pass   | Refer to Note 1                                                                   |
| 22.913<br>(d)                          | Peak To Average Ratio        | Pass   | Refer to Note 1                                                                   |
| 2.1055<br>22.355                       | Frequency Stability          | Pass   | Refer to Note 1                                                                   |
| 2.1049                                 | Occupied Bandwidth           | Pass   | Refer to Note 1                                                                   |
| 22.917                                 | Band Edge Measurements       | Pass   | Refer to Note 1                                                                   |
| 2.1051<br>22.917                       | Conducted Spurious Emissions | Pass   | Refer to Note 1                                                                   |
| 2.1053<br>22.917                       | Radiated Spurious Emissions  | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -35.00dB at 84.83MHz. |

Note:

1. This report is a partial report. Therefore, only test item of Transmitter Output Power and Effective Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to BV CPS report no.: RFBBQZ-WTW-P20120749-3.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 12, LTE Band 66

| Applied Standard: FCC Part 27 & Part 2 |                           |                                                                     |        |                                                                                   |
|----------------------------------------|---------------------------|---------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|
| FCC Clause                             |                           | Test Item                                                           | Result | Remarks                                                                           |
| LTE B12                                | LTE B66                   |                                                                     |        |                                                                                   |
| 2.1046<br>27.50<br>(c)                 | 2.1046<br>27.50<br>(d)(4) | Equivalent Isotropically Radiated Power / Equivalent Radiated Power | Pass   | Meet the requirement of limit.                                                    |
| 2.1047                                 | 2.1047                    | Modulation Characteristics                                          | Pass   | Refer to Note 1                                                                   |
| ----                                   | 27.50<br>(d)(5)           | Peak To Average Ratio                                               | Pass   | Refer to Note 1                                                                   |
| 2.1055<br>27.54                        | 2.1055<br>27.54           | Frequency Stability<br>Stay with the authorized bands of operation  | Pass   | Refer to Note 1                                                                   |
| 2.1049                                 | 2.1049                    | Occupied Bandwidth                                                  | Pass   | Refer to Note 1                                                                   |
| 2.1051<br>27.53<br>(g)                 | 2.1051<br>27.53<br>(h)    | Band Edge / Out of Band Emissions Measurements                      | Pass   | Refer to Note 1                                                                   |
| 2.1051<br>27.53<br>(g)                 | 2.1051<br>27.53<br>(h)    | Conducted Spurious Emissions                                        | Pass   | Refer to Note 1                                                                   |
| 2.1053<br>27.53<br>(g)                 | 2.1053<br>27.53<br>(h)    | Radiated Spurious Emissions                                         | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -32.10dB at 83.42MHz. |

Note:

1. This report is a partial report. Therefore, only test item of Transmitter Output Power and Equivalent Isotropically Radiated Power / Equivalent Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to BV CPS report no.: RFBBQZ-WTW-P20120749-5.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

## 2.1 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                    | Frequency        | Expanded Uncertainty (k=2) ( $\pm$ ) |
|--------------------------------|------------------|--------------------------------------|
| Radiated Emissions up to 1 GHz | 9kHz ~ 30MHz     | 3.04 dB                              |
|                                | 30MHz ~ 200MHz   | 3.59 dB                              |
|                                | 200MHz ~ 1000MHz | 3.60 dB                              |
| Radiated Emissions above 1 GHz | 1GHz ~ 18GHz     | 2.29 dB                              |
|                                | 18GHz ~ 40GHz    | 2.29 dB                              |

## 2.2 Test Site and Instruments

| Description & Manufacturer                                  | Model No.                              | Serial No.                      | Cal. Date     | Cal. Due      |
|-------------------------------------------------------------|----------------------------------------|---------------------------------|---------------|---------------|
| Test Receiver<br>KEYSIGHT                                   | N9038A                                 | MY55420137                      | Apr. 09, 2021 | Apr. 08, 2022 |
| Spectrum Analyzer<br>ROHDE & SCHWARZ                        | FSP40                                  | 100039                          | Jun. 12, 2020 | Jun. 11, 2021 |
| Spectrum Analyzer<br>ROHDE & SCHWARZ                        | FSW43                                  | 101866                          | Dec. 14, 2020 | Dec. 13, 2021 |
| MXG Vector signal generator<br>Agilent                      | N5182B                                 | MY53050430                      | Nov. 25, 2020 | Nov. 24, 2021 |
| 5G Wireless Test Platforms<br>Keysight                      | E7515B                                 | MY60102114                      | May 28, 2020  | May 27, 2021  |
| BILOG Antenna<br>SCHWARZBECK                                | VULB9168                               | 9168-472                        | Nov. 06, 2020 | Nov. 05, 2021 |
| HORN Antenna<br>SCHWARZBECK                                 | BBHA 9120D                             | 9120D-969                       | Nov. 22, 2020 | Nov. 21, 2021 |
| BILOG Antenna<br>SCHWARZBECK                                | VULB9168                               | 9168-160                        | Nov. 06, 2020 | Nov. 05, 2021 |
| HORN Antenna<br>SCHWARZBECK                                 | BBHA 9120 D                            | 9120D-1169                      | Nov. 22, 2020 | Nov. 21, 2021 |
| HORN Antenna<br>SCHWARZBECK                                 | BBHA 9170                              | BBHA9170241                     | Nov. 22, 2020 | Nov. 21, 2021 |
| Preamplifier<br>Agilent<br>(Below 1GHz)                     | 8447D                                  | 2944A10638                      | Jun. 08, 2020 | Jun. 07, 2021 |
| Preamplifier<br>Agilent<br>(Above 1GHz)                     | 8449B                                  | 3008A02367                      | Feb. 17, 2021 | Feb. 16, 2022 |
| RF signal cable<br>HUBER+SUHNER&EMCI                        | SUCOFLEX 104 &<br>EMC104-SM-<br>SM8000 | CABLE-CH9-02<br>(248780+171006) | Jan. 16, 2021 | Jan. 15, 2022 |
| RF signal cable<br>HUBER+SUHNER                             | SUCOFLEX 104                           | CABLE-CH9-(250795/4)            | Jan. 16, 2021 | Jan. 15, 2022 |
| RF signal cable<br>Woken                                    | 8D-FB                                  | Cable-CH9-01                    | Jun. 08, 2020 | Jun. 07, 2021 |
| Software<br>BV ADT                                          | ADT_Radiated_<br>V7.6.15.9.5           | NA                              | NA            | NA            |
| Antenna Tower<br>EMCO                                       | 2070/2080                              | 512.835.4684                    | NA            | NA            |
| Turn Table<br>EMCO                                          | 2087-2.03                              | NA                              | NA            | NA            |
| Antenna Tower & Turn<br>BV ADT                              | AT100                                  | AT93021705                      | NA            | NA            |
| Turn Table<br>BV ADT                                        | TT100                                  | TT93021705                      | NA            | NA            |
| Turn Table Controller<br>BV ADT                             | SC100                                  | SC93021705                      | NA            | NA            |
| Boresight Antenna Fixture                                   | FBA-01                                 | FBA-SIP01                       | NA            | NA            |
| Standard Temperature And<br>Humidity Chamber<br>GIANT FORCE | GTH-120-40-CP-<br>AR                   | MAA1306-019                     | Sep. 10, 2020 | Sep. 09, 2021 |



| Description & Manufacturer    | Model No.    | Serial No. | Cal. Date     | Cal. Due      |
|-------------------------------|--------------|------------|---------------|---------------|
| JFW 20dB attenuation          | 50HF-020-SMA | NA         | NA            | NA            |
| True RMS Clamp Meter<br>Fluke | 325          | 31130711WS | Jun. 06, 2020 | Jun. 05, 2021 |
| DC power supply<br>Keysight   | U8002A       | MY56330015 | NA            | NA            |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
2. The test was performed in HwaYa Chamber 9.

### 3 General Information

#### 3.1 General Description of EUT

|                     |                                                                   |
|---------------------|-------------------------------------------------------------------|
| Product             | 5G MHS Travel Router                                              |
| Brand               | NETGEAR                                                           |
| Test Model          | MR5200                                                            |
| Sample Status       | Engineering Sample                                                |
| Power Supply Rating | 5 or 9Vdc (adapter)<br>5Vdc (host equipment)<br>3.85Vdc (battery) |

#### n2

|                                    |                                          |                         |                         |                         |                         |
|------------------------------------|------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Modulation Type                    | $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM |                         |                         |                         |                         |
| Waveform Type                      | CP-OFDM, DFT-s-OFDM                      |                         |                         |                         |                         |
| Operating Frequency                | n2 (Channel Bandwidth 5MHz)              | 1852.5MHz ~ 1907.5MHz   |                         |                         |                         |
|                                    | n2 (Channel Bandwidth 10MHz)             | 1855.0MHz ~ 1905.0MHz   |                         |                         |                         |
|                                    | n2 (Channel Bandwidth 15MHz)             | 1857.5MHz ~ 1902.5MHz   |                         |                         |                         |
|                                    | n2 (Channel Bandwidth 20MHz)             | 1860.0MHz ~ 1900.0MHz   |                         |                         |                         |
| Max. EIRP Power (Internal Antenna) |                                          | $\pi/2$ BPSK            | QPSK                    | 16QAM                   | 64QAM                   |
|                                    | n2 (Channel Bandwidth 5MHz)              | 232.274mW<br>(23.66dBm) | 254.683mW<br>(24.06dBm) | 199.526mW<br>(23.00dBm) | 174.985mW<br>(22.43dBm) |
|                                    | n2 (Channel Bandwidth 10MHz)             | 254.097mW<br>(24.05dBm) | 278.612mW<br>(24.45dBm) | 199.526mW<br>(23.00dBm) | 174.582mW<br>(22.42dBm) |
|                                    | n2 (Channel Bandwidth 15MHz)             | 246.604mW<br>(23.92dBm) | 265.461mW<br>(24.24dBm) | 197.242mW<br>(22.95dBm) | 171.791mW<br>(22.35dBm) |
|                                    | n2 (Channel Bandwidth 20MHz)             | 228.034mW<br>(23.58dBm) | 250.035mW<br>(23.98dBm) | 223.357mW<br>(23.49dBm) | 194.536mW<br>(22.89dBm) |
| Max. EIRP Power (External Antenna) |                                          | $\pi/2$ BPSK            | QPSK                    | 16QAM                   | 64QAM                   |
|                                    | n2 (Channel Bandwidth 5MHz)              | 203.704mW<br>(23.09dBm) | 220.293mW<br>(23.43dBm) | 153.109mW<br>(21.85dBm) | 129.718mW<br>(21.13dBm) |
|                                    | n2 (Channel Bandwidth 10MHz)             | 211.349mW<br>(23.25dBm) | 231.739mW<br>(23.65dBm) | 184.927mW<br>(22.67dBm) | 146.555mW<br>(21.66dBm) |
|                                    | n2 (Channel Bandwidth 15MHz)             | 202.768mW<br>(23.07dBm) | 219.786mW<br>(23.42dBm) | 175.388mW<br>(22.44dBm) | 138.995mW<br>(21.43dBm) |
|                                    | n2 (Channel Bandwidth 20MHz)             | 207.970mW<br>(23.18dBm) | 228.034mW<br>(23.58dBm) | 180.717mW<br>(22.57dBm) | 143.549mW<br>(21.57dBm) |
| Emission Designator                |                                          | $\pi/2$ BPSK            | QPSK                    | 16QAM                   | 64QAM                   |
|                                    | n2 (Channel Bandwidth 5MHz)              | 4M46G7D                 | 4M47G7D                 | 4M47D7W                 | 4M47D7W                 |
|                                    | n2 (Channel Bandwidth 10MHz)             | 8M93G7D                 | 9M30G7D                 | 9M30D7W                 | 9M30D7W                 |
|                                    | n2 (Channel Bandwidth 15MHz)             | 13M4G7D                 | 14M2G7D                 | 14M2D7W                 | 14M2D7W                 |
|                                    | n2 (Channel Bandwidth 20MHz)             | 17M9G7D                 | 19M1G7D                 | 19M0D7W                 | 19M1D7W                 |

## LTE Band

| Modulation Type                      | QPSK, 16QAM, 64QAM, 256QAM             |                         |                         |                         |
|--------------------------------------|----------------------------------------|-------------------------|-------------------------|-------------------------|
| Operating<br>Frequency               | LTE Band 5 (Channel Bandwidth 1.4MHz)  | 824.7MHz ~ 848.3MHz     |                         |                         |
|                                      | LTE Band 5 (Channel Bandwidth 3MHz)    | 825.5MHz ~ 847.5MHz     |                         |                         |
|                                      | LTE Band 5 (Channel Bandwidth 5MHz)    | 826.5MHz ~ 846.5MHz     |                         |                         |
|                                      | LTE Band 5 (Channel Bandwidth 10MHz)   | 829.0MHz ~ 844.0MHz     |                         |                         |
|                                      | LTE Band 12 (Channel Bandwidth 1.4MHz) | 699.7MHz ~ 715.3MHz     |                         |                         |
|                                      | LTE Band 12 (Channel Bandwidth 3MHz)   | 700.5MHz ~ 714.5MHz     |                         |                         |
|                                      | LTE Band 12 (Channel Bandwidth 5MHz)   | 701.5MHz ~ 713.5MHz     |                         |                         |
|                                      | LTE Band 12 (Channel Bandwidth 10MHz)  | 704.0MHz ~ 711.0MHz     |                         |                         |
|                                      | LTE Band 66 (Channel Bandwidth 1.4MHz) | 1710.7MHz ~ 1779.3MHz   |                         |                         |
|                                      | LTE Band 66 (Channel Bandwidth 3MHz)   | 1711.5MHz ~ 1778.5MHz   |                         |                         |
|                                      | LTE Band 66 (Channel Bandwidth 5MHz)   | 1712.5MHz ~ 1777.5MHz   |                         |                         |
|                                      | LTE Band 66 (Channel Bandwidth 10MHz)  | 1715.0MHz ~ 1775.0MHz   |                         |                         |
|                                      | LTE Band 66 (Channel Bandwidth 15MHz)  | 1717.5MHz ~ 1772.5MHz   |                         |                         |
|                                      | LTE Band 66 (Channel Bandwidth 20MHz)  | 1720.0MHz ~ 1770.0MHz   |                         |                         |
| Max. ERP Power<br>(Internal Antenna) |                                        | QPSK                    | 16QAM                   | 64QAM                   |
|                                      |                                        |                         |                         | 256QAM                  |
|                                      | LTE Band 5 (Channel Bandwidth 1.4MHz)  | 83.753mW<br>(19.23dBm)  | 68.077mW<br>(18.33dBm)  | 61.235mW<br>(17.87dBm)  |
|                                      | LTE Band 5 (Channel Bandwidth 3MHz)    | 88.105mW<br>(19.45dBm)  | 73.282mW<br>(18.65dBm)  | 61.376mW<br>(17.88dBm)  |
|                                      | LTE Band 5 (Channel Bandwidth 5MHz)    | 87.902mW<br>(19.44dBm)  | 71.450mW<br>(18.54dBm)  | 63.387mW<br>(18.02dBm)  |
|                                      | LTE Band 5 (Channel Bandwidth 10MHz)   | 88.716mW<br>(19.48dBm)  | 72.111mW<br>(18.58dBm)  | 59.979mW<br>(17.78dBm)  |
|                                      | LTE Band 12 (Channel Bandwidth 1.4MHz) | 240.991mW<br>(23.82dBm) | 191.867mW<br>(22.83dBm) | 152.405mW<br>(21.83dBm) |
|                                      | LTE Band 12 (Channel Bandwidth 3MHz)   | 240.436mW<br>(23.81dBm) | 200.447mW<br>(23.02dBm) | 157.761mW<br>(21.98dBm) |
| Max. ERP Power<br>(External Antenna) | LTE Band 12 (Channel Bandwidth 5MHz)   | 239.883mW<br>(23.80dBm) | 191.426mW<br>(22.82dBm) | 152.405mW<br>(21.83dBm) |
|                                      | LTE Band 12 (Channel Bandwidth 10MHz)  | 240.436mW<br>(23.81dBm) | 190.985mW<br>(22.81dBm) | 151.705mW<br>(21.81dBm) |
|                                      |                                        | QPSK                    | 16QAM                   | 64QAM                   |
|                                      |                                        |                         |                         | 256QAM                  |
|                                      | LTE Band 5 (Channel Bandwidth 1.4MHz)  | 89.125mW<br>(19.50dBm)  | 71.121mW<br>(18.52dBm)  | 56.624mW<br>(17.53dBm)  |
|                                      | LTE Band 5 (Channel Bandwidth 3MHz)    | 88.920mW<br>(19.49dBm)  | 70.795mW<br>(18.50dBm)  | 56.234mW<br>(17.50dBm)  |
|                                      | LTE Band 5 (Channel Bandwidth 5MHz)    | 88.308mW<br>(19.46dBm)  | 69.984mW<br>(18.45dBm)  | 55.335mW<br>(17.43dBm)  |
|                                      | LTE Band 5 (Channel Bandwidth 10MHz)   | 89.536mW<br>(19.52dBm)  | 71.285mW<br>(18.53dBm)  | 56.364mW<br>(17.51dBm)  |
|                                      | LTE Band 12 (Channel Bandwidth 1.4MHz) | 75.162mW<br>(18.76dBm)  | 59.841mW<br>(17.77dBm)  | 47.753mW<br>(16.79dBm)  |
|                                      | LTE Band 12 (Channel Bandwidth 3MHz)   | 74.473mW<br>(18.72dBm)  | 59.293mW<br>(17.73dBm)  | 46.881mW<br>(16.71dBm)  |
|                                      | LTE Band 12 (Channel Bandwidth 5MHz)   | 73.961mW<br>(18.69dBm)  | 58.479mW<br>(17.67dBm)  | 46.345mW<br>(16.66dBm)  |
|                                      | LTE Band 12 (Channel Bandwidth 10MHz)  | 74.817mW<br>(18.74dBm)  | 59.156mW<br>(17.72dBm)  | 47.098mW<br>(16.73dBm)  |

| Max. EIRP Power<br>(Internal Antenna) |                                                                      | QPSK                    | 16QAM                  | 64QAM                  | 256QAM                 |
|---------------------------------------|----------------------------------------------------------------------|-------------------------|------------------------|------------------------|------------------------|
|                                       | LTE Band 66 (Channel Bandwidth 1.4MHz)                               | 123.595mW<br>(20.92dBm) | 97.949mW<br>(19.91dBm) | 77.983mW<br>(18.92dBm) | 62.230mW<br>(17.94dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 3MHz)                                 | 115.080mW<br>(20.61dBm) | 97.051mW<br>(19.87dBm) | 76.913mW<br>(18.86dBm) | 60.954mW<br>(17.85dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 5MHz)                                 | 124.165mW<br>(20.94dBm) | 99.083mW<br>(19.96dBm) | 78.886mW<br>(18.97dBm) | 62.806mW<br>(17.98dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 10MHz)                                | 123.880mW<br>(20.93dBm) | 99.312mW<br>(19.97dBm) | 79.068mW<br>(18.98dBm) | 63.096mW<br>(18.00dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 15MHz)                                | 123.310mW<br>(20.91dBm) | 98.175mW<br>(19.92dBm) | 77.804mW<br>(18.91dBm) | 61.518mW<br>(17.89dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 20MHz)                                | 122.462mW<br>(20.88dBm) | 97.724mW<br>(19.90dBm) | 77.804mW<br>(18.91dBm) | 61.944mW<br>(17.92dBm) |
|                                       |                                                                      | QPSK                    | 16QAM                  | 64QAM                  | 256QAM                 |
| Max. EIRP Power<br>(External Antenna) | LTE Band 66 (Channel Bandwidth 1.4MHz)                               | 85.114mW<br>(19.30dBm)  | 67.608mW<br>(18.30dBm) | 54.954mW<br>(17.40dBm) | 43.652mW<br>(16.40dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 3MHz)                                 | 85.114mW<br>(19.30dBm)  | 67.608mW<br>(18.30dBm) | 54.954mW<br>(17.40dBm) | 43.652mW<br>(16.40dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 5MHz)                                 | 85.114mW<br>(19.30dBm)  | 67.608mW<br>(18.30dBm) | 54.954mW<br>(17.40dBm) | 43.652mW<br>(16.40dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 10MHz)                                | 81.283mW<br>(19.10dBm)  | 64.565mW<br>(18.10dBm) | 54.954mW<br>(17.40dBm) | 43.652mW<br>(16.40dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 15MHz)                                | 91.201mW<br>(19.60dBm)  | 70.795mW<br>(18.50dBm) | 58.884mW<br>(17.70dBm) | 46.774mW<br>(16.70dBm) |
|                                       | LTE Band 66 (Channel Bandwidth 20MHz)                                | 100.000mW<br>(20.00dBm) | 79.433mW<br>(19.00dBm) | 63.096mW<br>(18.00dBm) | 50.119mW<br>(17.00dBm) |
|                                       |                                                                      |                         |                        |                        |                        |
|                                       |                                                                      |                         |                        |                        |                        |
| Antenna Type                          | Refer to Note                                                        |                         |                        |                        |                        |
| Antenna Connector                     | Refer to Note                                                        |                         |                        |                        |                        |
| Accessory Device                      | Adapter x1, battery x1                                               |                         |                        |                        |                        |
| Cable Supplied                        | 1m shielded USB cable without core (Brand: NIENYI, model: NYS2371-1) |                         |                        |                        |                        |

|                                                                    |                |                    |                      |                   |
|--------------------------------------------------------------------|----------------|--------------------|----------------------|-------------------|
| Output Power /<br>Emission<br>Designator<br><br>(Internal Antenna) | n2+LTE Band 5  |                    | Maximum EIRP         | Sum Bandwidth     |
|                                                                    |                | n2                 | 278.612mW (24.45dBm) | 18M3G7D           |
|                                                                    |                | LTE Band 5 (ERP)   | 88.716mW (19.48dBm)  |                   |
|                                                                    |                |                    | EIRP                 | MAX Sum Bandwidth |
|                                                                    |                | n2                 | 250.035mW (23.98dBm) | 28M1G7D           |
|                                                                    |                | LTE Band 5 (ERP)   | 59.979mW (17.78dBm)  |                   |
|                                                                    | n2+LTE Band 12 |                    | Maximum EIRP         | Sum Bandwidth     |
|                                                                    |                | n2                 | 278.612mW (24.45dBm) | 10M4G7D           |
|                                                                    |                | LTE Band 12 (ERP)  | 240.991mW (23.82dBm) |                   |
|                                                                    |                |                    | EIRP                 | MAX Sum Bandwidth |
|                                                                    |                | n2                 | 250.035mW (23.98dBm) | 28M1G7D           |
|                                                                    |                | LTE Band 12 (ERP)  | 151.705mW (21.81dBm) |                   |
|                                                                    | n2+LTE Band 66 |                    | Maximum EIRP         | Sum Bandwidth     |
|                                                                    |                | n2                 | 278.612mW (24.45dBm) | 13M8G7D           |
|                                                                    |                | LTE Band 66 (EIRP) | 124.165mW (20.94dBm) |                   |
|                                                                    |                |                    | EIRP                 | MAX Sum Bandwidth |
|                                                                    |                | n2                 | 250.035mW (23.98dBm) | 37M1G7D           |
|                                                                    |                | LTE Band 66 (EIRP) | 97.724mW (19.90dBm)  |                   |

|                                                                    |                |                    |                      |                   |
|--------------------------------------------------------------------|----------------|--------------------|----------------------|-------------------|
| Output Power /<br>Emission<br>Designator<br><br>(External Antenna) | n2+LTE Band 5  |                    | Maximum EIRP         | Sum Bandwidth     |
|                                                                    |                | n2                 | 231.739mW (23.65dBm) | 18M3G7D           |
|                                                                    |                | LTE Band 5 (ERP)   | 89.536mW (19.52dBm)  |                   |
|                                                                    |                |                    | EIRP                 | MAX Sum Bandwidth |
|                                                                    |                | n2                 | 228.034mW (23.58dBm) | 28M1G7D           |
|                                                                    |                | LTE Band 5 (ERP)   | 56.364mW (17.51dBm)  |                   |
|                                                                    | n2+LTE Band 12 |                    | Maximum EIRP         | Sum Bandwidth     |
|                                                                    |                | n2                 | 231.739mW (23.65dBm) | 10M4G7D           |
|                                                                    |                | LTE Band 12 (ERP)  | 75.162mW (18.76dBm)  |                   |
|                                                                    |                |                    | EIRP                 | MAX Sum Bandwidth |
|                                                                    |                | n2                 | 228.034mW (23.58dBm) | 28M7G7D           |
|                                                                    |                | LTE Band 12 (ERP)  | 47.098mW (16.73dBm)  |                   |
|                                                                    | n2+LTE Band 66 |                    | Maximum EIRP         | Sum Bandwidth     |
|                                                                    |                | n2                 | 231.739mW (23.65dBm) | 27M2G7D           |
|                                                                    |                | LTE Band 66 (EIRP) | 100.000mW (20.00dBm) |                   |
|                                                                    |                |                    | EIRP                 | MAX Sum Bandwidth |
|                                                                    |                | n2                 | 228.034mW (23.58dBm) | 37M1G7D           |
|                                                                    |                | LTE Band 66 (EIRP) | 79.433mW (19.00dBm)  |                   |

**Note:**

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report of BV CPS report no.: RFBBQZ-WTW-P20120749-6. Differences compared with the original report are changing model and adding ENDC n2A. Therefore, the EUT was tested and presented in the test report.
2. The EUT uses following adapter and battery.

| Adapter      |                           |
|--------------|---------------------------|
| Brand        | NETGEAR                   |
| Model        | AD2122F20                 |
| P/N          | 332-11106-01              |
| Input Power  | 100-240Vac, 50-60Hz, 0.5A |
| Output Power | 5Vdc, 2.0A<br>9Vdc, 1.8A  |

| Battery |                  |
|---------|------------------|
| Brand   | NETGEAR          |
| Model   | W-20             |
| Rating  | 3.85Vdc ,19.40Wh |

3. The following antennas were provided to the EUT.

**Internal Antenna**

| No. | Type     | Connector | Gain (dBi) |       |      |      |      |       |      |      |
|-----|----------|-----------|------------|-------|------|------|------|-------|------|------|
|     |          |           | B2         | B5    | B7   | B12  | B41  | B66   | B71  | B77  |
| 1   | Monopole | NA        | 1.83       | -0.23 | 2.66 | 1.24 | 2.66 | -0.01 | 0.91 | -    |
| 2   | Monopole | NA        | 1.03       | -0.38 | 2.56 | -    | -    | 0.34  | -    | 3.90 |

**External Antenna**

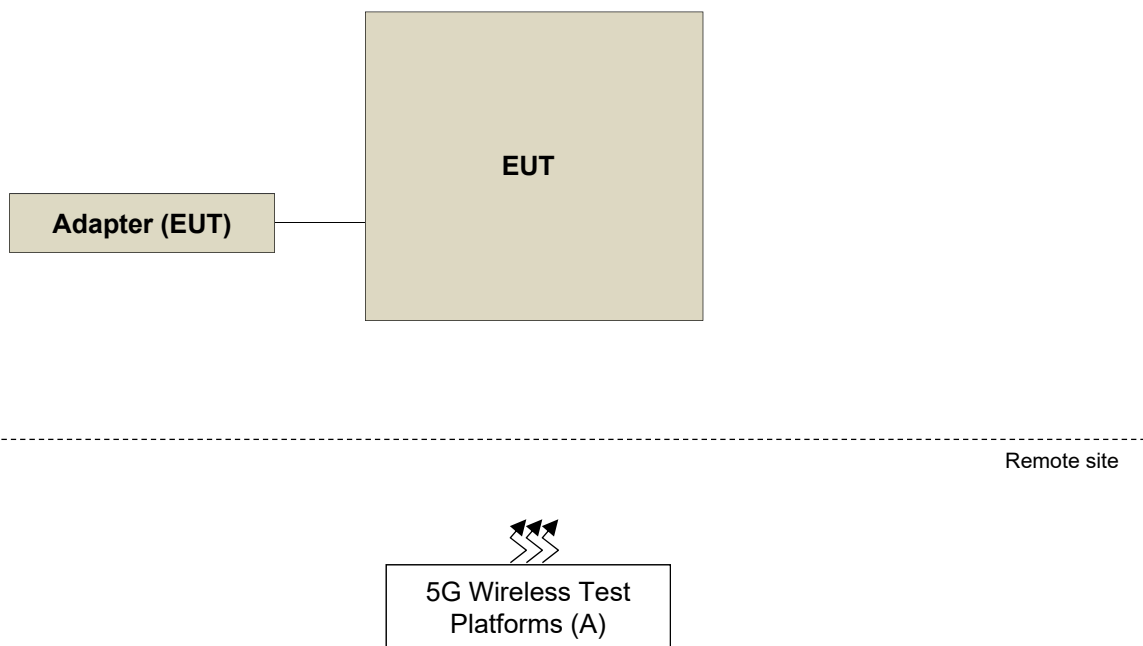
| No. | Type     | Connector  | Gain (dBi) |      |      |      |      |      |      |
|-----|----------|------------|------------|------|------|------|------|------|------|
|     |          |            | B2         | B5   | B7   | B12  | B41  | B66  | B71  |
| 1   | Monopole | TS-9 plugs | 0.48       | 0.54 | 0.24 | 0.54 | 0.24 | 0.48 | 0.54 |
| 2   | Monopole | TS-9 plugs | 0.25       | 0.48 | 0.28 | 0.48 | 0.28 | 0.25 | 0.48 |

\* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

4. The EUT supports the following ENDC configuration.

| 5GNR | FCC 5G FR1 |       |                          | ENDC           |
|------|------------|-------|--------------------------|----------------|
|      | Band       | SCS   | Bandwidth (MHz)          |                |
|      | n2         | 15kHz | 5/10/15/20               | Band 5/12/66   |
|      | n41        | 30kHz | 20/30/40/50/60/80/90/100 | Band 2/66      |
|      | n77        | 30kHz | 20/40/50/60/80/90/100    | Band 2/7/12/66 |

### 3.2 Configuration of System under Test



#### 3.2.1 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.

| ID | Product                    | Brand    | Model No. | Serial No. | FCC ID | Remarks |
|----|----------------------------|----------|-----------|------------|--------|---------|
| A. | 5G Wireless Test Platforms | Keysight | E7515B    | MY58300759 | NA     | -       |

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

### 3.3 Test Mode Applicability and Tested Channel Detail

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

| Band        | ERP/EIRP         |                  | Radiated Emission |                  |
|-------------|------------------|------------------|-------------------|------------------|
|             | Internal Antenna | External Antenna | Internal Antenna  | External Antenna |
| n2          | X-plane          | Z-plane          | X-plane           | Z-plane          |
| LTE Band 5  | X-plane          | Z-plane          | X-plane           | Z-plane          |
| LTE Band 12 | X-plane          | Z-plane          | X-plane           | Z-plane          |
| LTE Band 66 | X-plane          | Z-plane          | X-plane           | Z-plane          |

n2

| EUT Configure Mode | Test item                  | Available channel | Tested channel                                                   | Channel Bandwidth | Modulation                                            | Mode                 |
|--------------------|----------------------------|-------------------|------------------------------------------------------------------|-------------------|-------------------------------------------------------|----------------------|
| -                  | EIRP                       | 370500 to 381500  | 370500 (1852.5MHz),<br>376000 (1880.0MHz),<br>381500 (1907.5MHz) | 5MHz              | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset   |
|                    |                            | 371000 to 381000  | 371000 (1855.0MHz),<br>376000 (1880.0MHz),<br>381000 (1905.0MHz) | 10MHz             | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset   |
|                    |                            | 371500 to 380500  | 371500 (1857.5MHz),<br>376000 (1880.0MHz),<br>380500 (1902.5MHz) | 15MHz             | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset   |
|                    |                            | 372000 to 380000  | 372000 (1860.0MHz),<br>376000 (1880.0MHz),<br>380000 (1900.0MHz) | 20MHz             | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset   |
| -                  | Modulation characteristics | 372000 to 380000  | 376000 (1880.0MHz)                                               | 20MHz             | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 106 RB / 0 RB Offset |
| -                  | Frequency Stability        | 370500 to 381500  | 370500 (1852.5MHz),<br>381500 (1907.5MHz)                        | 5MHz              | QPSK                                                  | 25 RB / 0 RB Offset  |
|                    |                            | 371000 to 381000  | 371000 (1855.0MHz),<br>381000 (1905.0MHz)                        | 10MHz             | QPSK                                                  | 52 RB / 0 RB Offset  |
|                    |                            | 371500 to 380500  | 371500 (1857.5MHz),<br>380500 (1902.5MHz)                        | 15MHz             | QPSK                                                  | 79 RB / 0 RB Offset  |
|                    |                            | 372000 to 380000  | 372000 (1860.0MHz),<br>380000 (1900.0MHz)                        | 20MHz             | QPSK                                                  | 106 RB / 0 RB Offset |



| EUT<br>Configure<br>Mode | Test item                | Available channel | Tested channel                                                   | Channel<br>Bandwidth | Modulation                                            | Mode                                                               |
|--------------------------|--------------------------|-------------------|------------------------------------------------------------------|----------------------|-------------------------------------------------------|--------------------------------------------------------------------|
| -                        | Occupied Bandwidth       | 370500 to 381500  | 370500 (1852.5MHz),<br>376000 (1880.0MHz),<br>381500 (1907.5MHz) | 5MHz                 | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 25 RB / 0 RB Offset                                                |
|                          |                          | 371000 to 381000  | 371000 (1855.0MHz),<br>376000 (1880.0MHz),<br>381000 (1905.0MHz) | 10MHz                | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 52 RB / 0 RB Offset                                                |
|                          |                          | 371500 to 380500  | 371500 (1857.5MHz),<br>376000 (1880.0MHz),<br>380500 (1902.5MHz) | 15MHz                | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 79 RB / 0 RB Offset                                                |
|                          |                          | 372000 to 380000  | 372000 (1860.0MHz),<br>376000 (1880.0MHz),<br>380000 (1900.0MHz) | 20MHz                | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 106 RB / 0 RB Offset                                               |
| -                        | Band Edge                | 370500 to 381500  | 370500 (1852.5MHz),<br>381500 (1907.5MHz)                        | 5MHz                 | QPSK                                                  | 1 RB / 0 RB Offset<br>1 RB / 24 RB Offset<br>25 RB / 0 RB Offset   |
|                          |                          | 371000 to 381000  | 371000 (1855.0MHz),<br>381000 (1905.0MHz)                        | 10MHz                | QPSK                                                  | 1 RB / 0 RB Offset<br>1 RB / 51 RB Offset<br>52 RB / 0 RB Offset   |
|                          |                          | 371500 to 380500  | 371500 (1857.5MHz),<br>380500 (1902.5MHz)                        | 15MHz                | QPSK                                                  | 1 RB / 0 RB Offset<br>1 RB / 78 RB Offset<br>79 RB / 0 RB Offset   |
|                          |                          | 372000 to 380000  | 372000 (1860.0MHz),<br>380000 (1900.0MHz)                        | 20MHz                | QPSK                                                  | 1 RB / 0 RB Offset<br>1 RB / 105 RB Offset<br>106 RB / 0 RB Offset |
| -                        | Peak to Average<br>Ratio | 370500 to 381500  | 370500 (1852.5MHz),<br>376000 (1880.0MHz),<br>381500 (1907.5MHz) | 5MHz                 | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset                                                 |
|                          |                          | 371000 to 381000  | 371000 (1855.0MHz),<br>376000 (1880.0MHz),<br>381000 (1905.0MHz) | 10MHz                | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset                                                 |
|                          |                          | 371500 to 380500  | 371500 (1857.5MHz),<br>376000 (1880.0MHz),<br>380500 (1902.5MHz) | 15MHz                | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset                                                 |
|                          |                          | 372000 to 380000  | 372000 (1860.0MHz),<br>376000 (1880.0MHz),<br>380000 (1900.0MHz) | 20MHz                | $\pi/2$ BPSK /<br>QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset                                                 |

| EUT<br>Configure<br>Mode | Test item                       | Available channel | Tested channel                                                   | Channel<br>Bandwidth | Modulation | Mode               |
|--------------------------|---------------------------------|-------------------|------------------------------------------------------------------|----------------------|------------|--------------------|
| -                        | Conducted Emission              | 370500 to 381500  | 370500 (1852.5MHz),<br>376000 (1880.0MHz),<br>381500 (1907.5MHz) | 5MHz                 | QPSK       | 1 RB / 1 RB Offset |
|                          |                                 | 371000 to 381000  | 371000 (1855.0MHz),<br>376000 (1880.0MHz),<br>381000 (1905.0MHz) | 10MHz                | QPSK       | 1 RB / 1 RB Offset |
|                          |                                 | 371500 to 380500  | 371500 (1857.5MHz),<br>376000 (1880.0MHz),<br>380500 (1902.5MHz) | 15MHz                | QPSK       | 1 RB / 1 RB Offset |
|                          |                                 | 372000 to 380000  | 372000 (1860.0MHz),<br>376000 (1880.0MHz),<br>380000 (1900.0MHz) | 20MHz                | QPSK       | 1 RB / 1 RB Offset |
| -                        | Radiated Emission<br>Below 1GHz | 370500 to 381500  | 381500 (1907.5MHz)                                               | 5MHz                 | QPSK       | 1 RB / 1 RB Offset |
| -                        | Radiated Emission<br>Above 1GHz | 370500 to 381500  | 370500 (1852.5MHz),<br>376000 (1880.0MHz),<br>381500 (1907.5MHz) | 5MHz                 | QPSK       | 1 RB / 1 RB Offset |
|                          |                                 | 372000 to 380000  | 372000 (1860.0MHz),<br>376000 (1880.0MHz),<br>380000 (1900.0MHz) | 20MHz                | QPSK       | 1 RB / 1 RB Offset |

Note:

1. Only output power, modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under  $\pi/2$  BPSK, QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under worse mode according to the maximum output power.
2. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
3. For radiated emission above 1GHz, according to 3GPP 38.521-1 Section 6.5.3.1.4, choose the lowest and highest channel bandwidth for final test.

## LTE Band 5

| EUT<br>Configure<br>Mode | Test item                       | Available channel | Tested channel                                             | Channel<br>Bandwidth | Modulation                          | Mode               |
|--------------------------|---------------------------------|-------------------|------------------------------------------------------------|----------------------|-------------------------------------|--------------------|
| -                        | ERP                             | 20407 to 20643    | 20407 (824.7MHz),<br>20525 (836.5MHz),<br>20643 (848.3MHz) | 1.4MHz               | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                          |                                 | 20415 to 20635    | 20415 (825.5MHz),<br>20525 (836.5MHz),<br>20635 (847.5MHz) | 3MHz                 | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                          |                                 | 20425 to 20625    | 20425 (826.5MHz),<br>20525 (836.5MHz),<br>20625 (846.5MHz) | 5MHz                 | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                          |                                 | 20450 to 20600    | 20450 (829.0MHz),<br>20525 (836.5MHz),<br>20600 (844.0MHz) | 10MHz                | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
| -                        | Radiated Emission<br>Below 1GHz | 20450 to 20600    | 20525 (836.5MHz)<br>(Internal Antenna)                     | 10MHz                | QPSK                                | 1 RB / 0 RB Offset |
|                          |                                 | 20407 to 20643    | 20407 (824.7MHz)<br>(External Antenna)                     | 1.4MHz               | QPSK                                | 1 RB / 0 RB Offset |
| -                        | Radiated Emission<br>Above 1GHz | 20407 to 20643    | 20407 (824.7MHz),<br>20525 (836.5MHz),<br>20643 (848.3MHz) | 1.4MHz               | QPSK                                | 1 RB / 0 RB Offset |
|                          |                                 | 20425 to 20625    | 20425 (826.5MHz),<br>20525 (836.5MHz),<br>20625 (846.5MHz) | 5MHz                 | QPSK                                | 1 RB / 0 RB Offset |
|                          |                                 | 20450 to 20600    | 20450 (829.0MHz),<br>20525 (836.5MHz),<br>20600 (844.0MHz) | 10MHz                | QPSK                                | 1 RB / 0 RB Offset |

### Note:

1. The output power for QPSK, 16QAM, 64QAM and 256QAM, measured value of QPSK is higher than 16QAM, 64QAM and 256QAM mode. Therefore the radiated emission test items was performed under QPSK mode only.
2. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
3. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.

# LTE Band 12

| EUT<br>Configure<br>Mode | Test item                       | Available channel | Tested channel                                              | Channel<br>Bandwidth | Modulation                          | Mode               |
|--------------------------|---------------------------------|-------------------|-------------------------------------------------------------|----------------------|-------------------------------------|--------------------|
| -                        | ERP                             | 23017 to 23173    | 23017 (699.7MHz),<br>23095 (707.5MHz),<br>23173 (715.3MHz)  | 1.4MHz               | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                          |                                 | 23025 to 23165    | 23025 (700.5MHz),<br>23095 (707.5MHz),<br>23165 (714.5MHz)  | 3MHz                 | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                          |                                 | 23035 to 23155    | 23035 (701.5MHz),<br>23095 (707.5MHz),<br>23155 (713.5MHz)  | 5MHz                 | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                          |                                 | 23060 to 23130    | 23060 (704.0MHz),<br>23095 (707.5MHz),<br>23130 (711.0 MHz) | 10MHz                | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
| -                        | Radiated Emission<br>Below 1GHz | 23017 to 23173    | 23017 (699.7MHz)                                            | 1.4MHz               | QPSK                                | 1 RB / 0 RB Offset |
| -                        | Radiated Emission<br>Above 1GHz | 23017 to 23173    | 23017 (699.7MHz),<br>23095 (707.5MHz),<br>23173 (715.3MHz)  | 1.4MHz               | QPSK                                | 1 RB / 0 RB Offset |
|                          |                                 | 23035 to 23155    | 23035 (701.5MHz),<br>23095 (707.5MHz),<br>23155 (713.5MHz)  | 5MHz                 | QPSK                                | 1 RB / 0 RB Offset |
|                          |                                 | 23060 to 23130    | 23060 (704.0MHz),<br>23095 (707.5MHz),<br>23130 (711.0MHz)  | 10MHz                | QPSK                                | 1 RB / 0 RB Offset |

## Note:

1. The output power for QPSK, 16QAM, 64QAM and 256QAM, measured value of QPSK is higher than 16QAM, 64QAM and 256QAM mode. Therefore the radiated emission test items was performed under QPSK mode only.
2. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
3. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.

# LTE Band 66

| EUT Configure Mode | Test Item                       | Available Channel | Tested Channel                                                   | Channel Bandwidth | Modulation                          | Mode               |
|--------------------|---------------------------------|-------------------|------------------------------------------------------------------|-------------------|-------------------------------------|--------------------|
| -                  | EIRP                            | 131979 to 132665  | 131979 (1710.7MHz),<br>132322 (1745.0MHz),<br>132665 (1779.3MHz) | 1.4MHz            | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                    |                                 | 131987 to 132657  | 131987 (1711.5MHz),<br>132322 (1745.0MHz),<br>132657 (1778.5MHz) | 3MHz              | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                    |                                 | 131997 to 132647  | 131997 (1712.5MHz),<br>132322 (1745.0MHz),<br>132647 (1777.5MHz) | 5MHz              | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                    |                                 | 132022 to 132622  | 132022 (1715.0MHz),<br>132322 (1745.0MHz),<br>132622 (1775.0MHz) | 10MHz             | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                    |                                 | 132047 to 132597  | 132047 (1717.5MHz),<br>132322 (1745.0MHz),<br>132597 (1772.5MHz) | 15MHz             | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
|                    |                                 | 132072 to 132572  | 132072 (1720.0MHz),<br>132322 (1745.0MHz),<br>132572 (1770.0MHz) | 20MHz             | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 1 RB Offset |
| -                  | Radiated Emission<br>Below 1GHz | 131979 to 132665  | 132665 (1779.3MHz)<br>(Internal Antenna)                         | 1.4MHz            | QPSK                                | 1 RB / 0 RB Offset |
|                    |                                 | 131979 to 132665  | 132322 (1745.0MHz)<br>(External Antenna)                         | 1.4MHz            | QPSK                                | 1 RB / 0 RB Offset |
| -                  | Radiated Emission<br>Above 1GHz | 131979 to 132665  | 131979 (1710.7MHz),<br>132322 (1745.0MHz),<br>132665 (1779.3MHz) | 1.4MHz            | QPSK                                | 1 RB / 0 RB Offset |
|                    |                                 | 131997 to 132647  | 131997 (1712.5MHz),<br>132322 (1745.0MHz),<br>132647 (1777.5MHz) | 5MHz              | QPSK                                | 1 RB / 0 RB Offset |
|                    |                                 | 132072 to 132572  | 132072 (1720.0MHz),<br>132322 (1745.0MHz),<br>132572 (1770.0MHz) | 20MHz             | QPSK                                | 1 RB / 0 RB Offset |

## Note:

1. The output power for QPSK, 16QAM, 64QAM and 256QAM, measured value of QPSK is higher than 16QAM, 64QAM and 256QAM mode. Therefore the radiated emission test items was performed under QPSK mode only.
2. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
3. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.

**Test Condition:**

| Test Item                  | Environmental Conditions                                                 | Input Power  | Tested By                         |
|----------------------------|--------------------------------------------------------------------------|--------------|-----------------------------------|
| EIRP / ERP                 | 21deg. C, 69%RH<br>22deg. C, 66%RH                                       | 120Vac, 60Hz | Luis Lee<br>Greg Lin<br>Titan Hsu |
| Modulation Characteristics | 22deg. C, 66%RH                                                          | 120Vac, 60Hz | Gavin Wu                          |
| Frequency Stability        | 22deg. C, 66%RH                                                          | 3.85Vdc      | Gavin Wu                          |
| Occupied Bandwidth         | 22deg. C, 66%RH                                                          | 120Vac, 60Hz | Gavin Wu                          |
| Band Edge                  | 22deg. C, 66%RH                                                          | 120Vac, 60Hz | Gavin Wu                          |
| Peak To Average Ratio      | 22deg. C, 66%RH                                                          | 120Vac, 60Hz | Gavin Wu                          |
| Conducted Emission         | 22deg. C, 66%RH                                                          | 120Vac, 60Hz | Gavin Wu                          |
| Radiated Emission          | 25deg. C, 70%RH<br>23deg. C, 66%RH<br>21deg. C, 68%RH<br>21deg. C, 69%RH | 120Vac, 60Hz | Hans Wu<br>Luis Lee<br>Titan Hsu  |

### 3.4 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

### 3.5 General Description of Applied Standards and References

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

**Test Standard:**

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 22**

**FCC 47 CFR Part 24**

**FCC 47 CFR Part 27**

**ANSI/TIA/EIA-603-D-2010**

**ANSI/TIA/EIA-603-E 2016**

ANSI 63.26-2015

**References Test Guidance:**

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

**KDB 971168 D02 Misc Rev Approv License Devices v02r01**

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

## **4 Test Types and Results**

### **4.1 Output Power Measurement**

#### **4.1.1 Limits of Output Power Measurement**

For n2:

Mobile / Portable station are limited to 2 watts e.i.r.p.

For LTE Band 5:

Mobile / Portable station are limited to 7 watts e.r.p.

For LTE Band 12:

Control and mobile stations in the 698-746 MHz, 746-757 MHz, 787-788 MHz and 805-806 MHz band are limited to 30 watts ERP.

Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink, 746-757 MHz, 787-788 MHz and 805-806 MHz band are limited to 3 watts ERP.

For LTE Band 66:

Mobile / Portable station are limited to 1 watts e.i.r.p.

#### 4.1.2 Test Procedures

##### EIRP / ERP Measurement:

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) 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 height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following C63.26 section 5.2.7 and 5.2.2.4
  - $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$ ; where D is the measurement distance (in the far field region) in m.
  - $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$ ; where D is the measurement distance (in the far field region) in m.

##### Conducted Power Measurement:

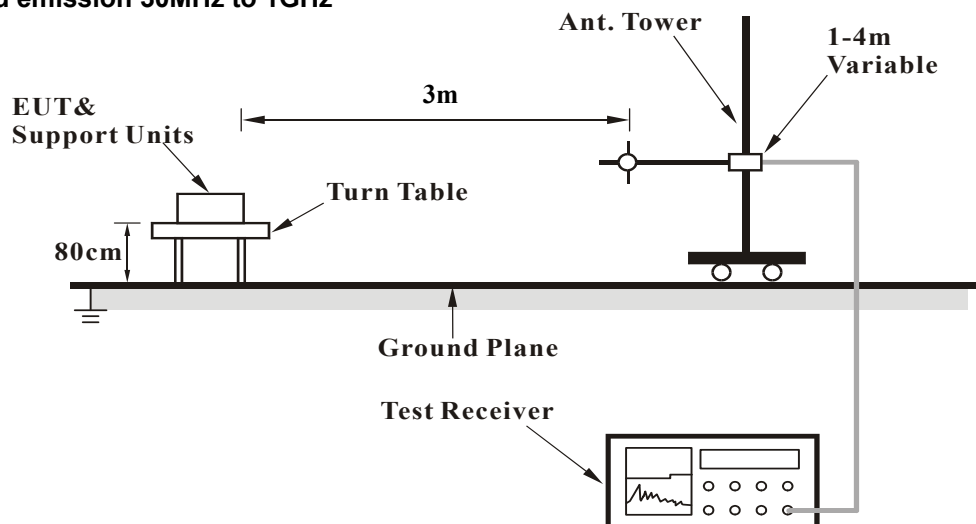
The EUT was set up for the maximum power with 5GNR, LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



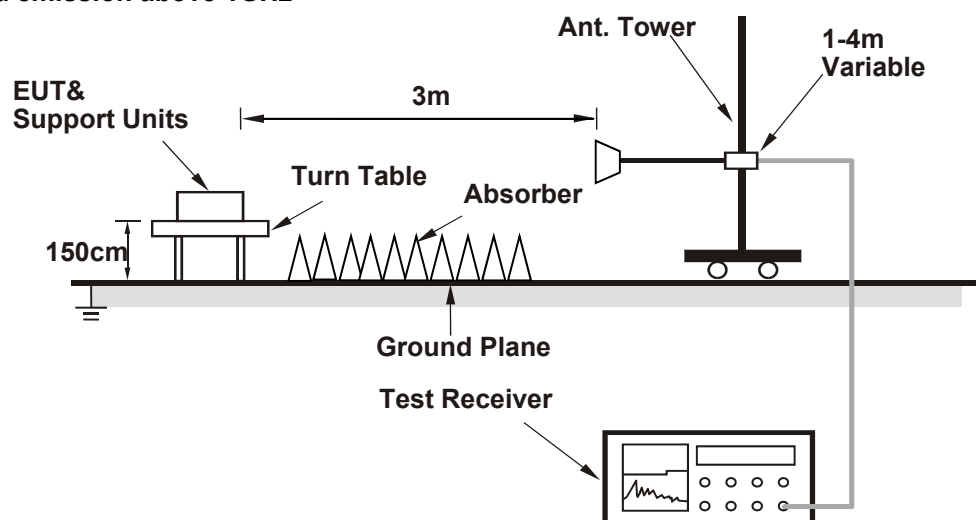
### 4.1.3 Test Setup

EIRP / ERP Measurement:

**For radiated emission 30MHz to 1GHz**



**For radiated emission above 1GHz**



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

Conducted Power Measurement:



#### 4.1.4 Test Results

##### Conducted Output Power (dBm)

| NR Band 2 |              |                 |           |        |        |        |
|-----------|--------------|-----------------|-----------|--------|--------|--------|
| BW        | MCS Index    | RB Size         | RB Offset | Low    | Mid    | High   |
|           |              | Channel         |           | 372000 | 376000 | 380000 |
|           |              | Frequency (MHz) |           | 1860   | 1880   | 1900   |
| 20M       | $\pi/2$ BPSK | 1               | 1         | 23.17  | 22.78  | 23.35  |
| 20M       | QPSK         | 1               | 1         | 23.32  | 22.89  | 23.38  |
|           |              | 1               | 53        | 22.91  | 22.85  | 22.92  |
|           |              | 1               | 104       | 22.53  | 22.53  | 22.62  |
|           |              | 50              | 0         | 22.64  | 22.72  | 22.85  |
|           |              | 50              | 28        | 23.02  | 22.87  | 23.15  |
|           |              | 50              | 56        | 22.45  | 22.54  | 22.67  |
|           |              | 100             | 0         | 22.50  | 22.63  | 22.65  |
| 20M       | 16QAM        | 1               | 1         | 22.67  | 22.70  | 22.77  |
| 20M       | 64QAM        | 1               | 1         | 21.17  | 21.20  | 21.27  |
| 20M       | 256QAM       | 1               | 1         | 19.17  | 19.20  | 19.27  |
| BW        | MCS Index    | Channel         |           | 371500 | 376000 | 380500 |
|           |              | Frequency (MHz) |           | 1857.5 | 1880   | 1902.5 |
| 15M       | $\pi/2$ BPSK | 1               | 1         | 23.14  | 22.75  | 23.31  |
| 15M       | QPSK         | 1               | 1         | 23.31  | 22.76  | 23.37  |
|           |              | 1               | 40        | 22.87  | 22.65  | 22.89  |
|           |              | 1               | 77        | 22.46  | 22.52  | 22.55  |
|           |              | 36              | 0         | 22.60  | 22.70  | 22.77  |
|           |              | 36              | 22        | 22.98  | 23.12  | 23.02  |
|           |              | 36              | 43        | 22.42  | 22.52  | 22.61  |
|           |              | 75              | 0         | 22.44  | 22.54  | 22.65  |
| 15M       | 16QAM        | 1               | 1         | 22.61  | 22.70  | 22.76  |
| 15M       | 64QAM        | 1               | 1         | 20.87  | 20.74  | 20.86  |
| 15M       | 256QAM       | 1               | 1         | 18.69  | 19.08  | 19.21  |

| NR Band 2 |              |                 |           |        |        |        |
|-----------|--------------|-----------------|-----------|--------|--------|--------|
| BW        | MCS Index    | RB Size         | RB Offset | Low    | Mid    | High   |
|           |              | Channel         |           | 371000 | 376000 | 381000 |
|           |              | Frequency (MHz) |           | 1855   | 1880   | 1905   |
| 10M       | $\pi/2$ BPSK | 1               | 1         | 23.14  | 22.61  | 23.25  |
| 10M       | QPSK         | 1               | 1         | 23.28  | 22.68  | 23.31  |
|           |              | 1               | 26        | 22.80  | 22.67  | 22.74  |
|           |              | 1               | 50        | 22.37  | 22.38  | 22.51  |
|           |              | 25              | 0         | 22.58  | 22.64  | 22.77  |
|           |              | 25              | 14        | 22.95  | 22.98  | 22.79  |
|           |              | 25              | 27        | 22.28  | 22.51  | 22.57  |
|           |              | 50              | 0         | 22.44  | 22.49  | 22.63  |
| 10M       | 16QAM        | 1               | 1         | 22.56  | 22.68  | 22.61  |
| 10M       | 64QAM        | 1               | 1         | 20.96  | 21.06  | 20.96  |
| 10M       | 256QAM       | 1               | 1         | 18.85  | 18.87  | 19.02  |
| BW        | MCS Index    | Channel         |           | 370500 | 376000 | 381500 |
|           |              | Frequency (MHz) |           | 1852.5 | 1880   | 1907.5 |
| 5M        | $\pi/2$ BPSK | 1               | 1         | 23.01  | 22.63  | 23.21  |
| 5M        | QPSK         | 1               | 1         | 23.17  | 22.77  | 23.25  |
|           |              | 1               | 13        | 22.70  | 22.71  | 22.71  |
|           |              | 1               | 23        | 22.41  | 22.34  | 22.45  |
|           |              | 12              | 0         | 22.55  | 22.66  | 22.50  |
|           |              | 12              | 7         | 22.89  | 22.99  | 22.86  |
|           |              | 12              | 13        | 22.40  | 22.45  | 22.39  |
|           |              | 25              | 0         | 22.26  | 22.47  | 22.59  |
| 5M        | 16QAM        | 1               | 1         | 22.54  | 22.57  | 22.70  |
| 5M        | 64QAM        | 1               | 1         | 20.95  | 21.04  | 20.85  |
| 5M        | 256QAM       | 1               | 1         | 18.94  | 18.85  | 18.89  |

## EIRP / ERP Power

Internal Antenna

Modulation Type:  $\pi/2$  BPSK

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 16.68                             | 33.00       | -16.32      | 3.84 H             | 211                  | 82.50            | -65.82                   |
| 2                                                   | 1880.00         | 17.21                             | 33.00       | -15.79      | 3.92 H             | 208                  | 82.82            | -65.61                   |
| 3                                                   | 1907.50         | 17.14                             | 33.00       | -15.86      | 3.86 H             | 212                  | 82.53            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 23.66                             | 33.00       | -9.34       | 1.84 V             | 318                  | 89.48            | -65.82                   |
| 2                                                   | 1880.00         | 23.54                             | 33.00       | -9.46       | 1.76 V             | 323                  | 89.15            | -65.61                   |
| 3                                                   | 1907.50         | 23.49                             | 33.00       | -9.51       | 1.77 V             | 323                  | 88.88            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 17.06                             | 33.00       | -15.94      | 3.82 H             | 208                  | 82.86            | -65.80                   |
| 2                                                   | 1880.00         | 17.60                             | 33.00       | -15.40      | 3.84 H             | 208                  | 83.21            | -65.61                   |
| 3                                                   | 1905.00         | 17.05                             | 33.00       | -15.95      | 3.87 H             | 213                  | 82.46            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 24.00                             | 33.00       | -9.00       | 1.84 V             | 318                  | 89.80            | -65.80                   |
| 2                                                   | 1880.00         | 24.05                             | 33.00       | -8.95       | 1.76 V             | 320                  | 89.66            | -65.61                   |
| 3                                                   | 1905.00         | 23.48                             | 33.00       | -9.52       | 1.84 V             | 323                  | 88.89            | -65.41                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 17.32                             | 33.00       | -15.68      | 3.82 H             | 212                  | 83.11            | -65.79                   |
| 2                                                   | 1880.00         | 17.20                             | 33.00       | -15.80      | 3.90 H             | 208                  | 82.81            | -65.61                   |
| 3                                                   | 1902.50         | 17.35                             | 33.00       | -15.65      | 3.89 H             | 208                  | 82.78            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 23.92                             | 33.00       | -9.08       | 1.76 V             | 318                  | 89.71            | -65.79                   |
| 2                                                   | 1880.00         | 23.70                             | 33.00       | -9.30       | 1.84 V             | 323                  | 89.31            | -65.61                   |
| 3                                                   | 1902.50         | 23.50                             | 33.00       | -9.50       | 1.80 V             | 317                  | 88.93            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 17.16                             | 33.00       | -15.84      | 3.92 H             | 207                  | 82.92            | -65.76                   |
| 2                                                   | 1880.00         | 17.03                             | 33.00       | -15.97      | 3.87 H             | 210                  | 82.64            | -65.61                   |
| 3                                                   | 1900.00         | 17.27                             | 33.00       | -15.73      | 3.90 H             | 208                  | 82.72            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 23.58                             | 33.00       | -9.42       | 1.84 V             | 318                  | 89.34            | -65.76                   |
| 2                                                   | 1880.00         | 23.47                             | 33.00       | -9.53       | 1.78 V             | 317                  | 89.08            | -65.61                   |
| 3                                                   | 1900.00         | 23.37                             | 33.00       | -9.63       | 1.80 V             | 324                  | 88.82            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

### Modulation Type: QPSK

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 17.18                             | 33.00       | -15.82      | 3.84 H             | 211                  | 83.00            | -65.82                   |
| 2                                                   | 1880.00         | 17.71                             | 33.00       | -15.29      | 3.92 H             | 208                  | 83.32            | -65.61                   |
| 3                                                   | 1907.50         | 17.74                             | 33.00       | -15.26      | 3.86 H             | 212                  | 83.13            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 24.06                             | 33.00       | -8.94       | 1.84 V             | 318                  | 89.88            | -65.82                   |
| 2                                                   | 1880.00         | 24.04                             | 33.00       | -8.96       | 1.76 V             | 323                  | 89.65            | -65.61                   |
| 3                                                   | 1907.50         | 23.99                             | 33.00       | -9.01       | 1.77 V             | 323                  | 89.38            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 17.36                             | 33.00       | -15.64      | 3.82 H             | 208                  | 83.16            | -65.80                   |
| 2                                                   | 1880.00         | 17.92                             | 33.00       | -15.08      | 3.84 H             | 208                  | 83.53            | -65.61                   |
| 3                                                   | 1905.00         | 17.26                             | 33.00       | -15.74      | 3.87 H             | 213                  | 82.67            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 24.42                             | 33.00       | -8.58       | 1.84 V             | 318                  | 90.22            | -65.80                   |
| 2                                                   | 1880.00         | 24.45                             | 33.00       | -8.55       | 1.76 V             | 320                  | 90.06            | -65.61                   |
| 3                                                   | 1905.00         | 23.78                             | 33.00       | -9.22       | 1.84 V             | 323                  | 89.19            | -65.41                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 17.82                             | 33.00       | -15.18      | 3.82 H             | 212                  | 83.61            | -65.79                   |
| 2                                                   | 1880.00         | 17.51                             | 33.00       | -15.49      | 3.90 H             | 208                  | 83.12            | -65.61                   |
| 3                                                   | 1902.50         | 17.95                             | 33.00       | -15.05      | 3.89 H             | 208                  | 83.38            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 24.24                             | 33.00       | -8.76       | 1.76 V             | 318                  | 90.03            | -65.79                   |
| 2                                                   | 1880.00         | 23.90                             | 33.00       | -9.10       | 1.84 V             | 323                  | 89.51            | -65.61                   |
| 3                                                   | 1902.50         | 23.84                             | 33.00       | -9.16       | 1.80 V             | 317                  | 89.27            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 17.36                             | 33.00       | -15.64      | 3.92 H             | 207                  | 83.12            | -65.76                   |
| 2                                                   | 1880.00         | 17.26                             | 33.00       | -15.74      | 3.87 H             | 210                  | 82.87            | -65.61                   |
| 3                                                   | 1900.00         | 17.47                             | 33.00       | -15.53      | 3.90 H             | 208                  | 82.92            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 23.98                             | 33.00       | -9.02       | 1.84 V             | 318                  | 89.74            | -65.76                   |
| 2                                                   | 1880.00         | 23.72                             | 33.00       | -9.28       | 1.78 V             | 317                  | 89.33            | -65.61                   |
| 3                                                   | 1900.00         | 23.72                             | 33.00       | -9.28       | 1.80 V             | 324                  | 89.17            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

### Modulation Type: 16QAM

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 16.50                             | 33.00       | -16.50      | 3.85 H             | 212                  | 82.32            | -65.82                   |
| 2                                                   | 1880.00         | 16.60                             | 33.00       | -16.40      | 3.82 H             | 211                  | 82.21            | -65.61                   |
| 3                                                   | 1907.50         | 16.90                             | 33.00       | -16.10      | 3.89 H             | 208                  | 82.29            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 22.80                             | 33.00       | -10.20      | 1.79 V             | 320                  | 88.62            | -65.82                   |
| 2                                                   | 1880.00         | 22.80                             | 33.00       | -10.20      | 1.84 V             | 320                  | 88.41            | -65.61                   |
| 3                                                   | 1907.50         | 23.00                             | 33.00       | -10.00      | 1.79 V             | 318                  | 88.39            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 16.20                             | 33.00       | -16.80      | 3.84 H             | 208                  | 82.00            | -65.80                   |
| 2                                                   | 1880.00         | 16.50                             | 33.00       | -16.50      | 3.88 H             | 208                  | 82.11            | -65.61                   |
| 3                                                   | 1905.00         | 16.50                             | 33.00       | -16.50      | 3.87 H             | 211                  | 81.91            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 22.80                             | 33.00       | -10.20      | 1.83 V             | 324                  | 88.60            | -65.80                   |
| 2                                                   | 1880.00         | 22.80                             | 33.00       | -10.20      | 1.76 V             | 318                  | 88.41            | -65.61                   |
| 3                                                   | 1905.00         | 23.00                             | 33.00       | -10.00      | 1.80 V             | 322                  | 88.41            | -65.41                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.



n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 16.78                             | 33.00       | -16.22      | 3.87 H             | 208                  | 82.57            | -65.79                   |
| 2                                                   | 1880.00         | 16.29                             | 33.00       | -16.71      | 3.92 H             | 207                  | 81.90            | -65.61                   |
| 3                                                   | 1902.50         | 16.19                             | 33.00       | -16.81      | 3.87 H             | 210                  | 81.62            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 22.88                             | 33.00       | -10.12      | 1.85 V             | 321                  | 88.67            | -65.79                   |
| 2                                                   | 1880.00         | 22.95                             | 33.00       | -10.05      | 1.77 V             | 319                  | 88.56            | -65.61                   |
| 3                                                   | 1902.50         | 22.84                             | 33.00       | -10.16      | 1.83 V             | 317                  | 88.27            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 16.61                             | 33.00       | -16.39      | 3.84 H             | 214                  | 82.37            | -65.76                   |
| 2                                                   | 1880.00         | 16.57                             | 33.00       | -16.43      | 3.86 H             | 213                  | 82.18            | -65.61                   |
| 3                                                   | 1900.00         | 16.37                             | 33.00       | -16.63      | 3.91 H             | 208                  | 81.82            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 23.26                             | 33.00       | -9.74       | 1.85 V             | 319                  | 89.02            | -65.76                   |
| 2                                                   | 1880.00         | 23.49                             | 33.00       | -9.51       | 1.84 V             | 324                  | 89.10            | -65.61                   |
| 3                                                   | 1900.00         | 22.76                             | 33.00       | -10.24      | 1.84 V             | 324                  | 88.21            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

### Modulation Type: 64QAM

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 15.87                             | 33.00       | -17.13      | 3.84 H             | 212                  | 81.69            | -65.82                   |
| 2                                                   | 1880.00         | 16.04                             | 33.00       | -16.96      | 3.87 H             | 214                  | 81.65            | -65.61                   |
| 3                                                   | 1907.50         | 16.43                             | 33.00       | -16.57      | 3.89 H             | 213                  | 81.82            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 22.22                             | 33.00       | -10.78      | 1.80 V             | 324                  | 88.04            | -65.82                   |
| 2                                                   | 1880.00         | 22.43                             | 33.00       | -10.57      | 1.76 V             | 318                  | 88.04            | -65.61                   |
| 3                                                   | 1907.50         | 22.37                             | 33.00       | -10.63      | 1.84 V             | 317                  | 87.76            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 15.57                             | 33.00       | -17.43      | 3.90 H             | 213                  | 81.37            | -65.80                   |
| 2                                                   | 1880.00         | 16.06                             | 33.00       | -16.94      | 3.89 H             | 207                  | 81.67            | -65.61                   |
| 3                                                   | 1905.00         | 16.10                             | 33.00       | -16.90      | 3.91 H             | 212                  | 81.51            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 22.42                             | 33.00       | -10.58      | 1.78 V             | 319                  | 88.22            | -65.80                   |
| 2                                                   | 1880.00         | 22.30                             | 33.00       | -10.70      | 1.79 V             | 317                  | 87.91            | -65.61                   |
| 3                                                   | 1905.00         | 22.37                             | 33.00       | -10.63      | 1.76 V             | 323                  | 87.78            | -65.41                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 16.18                             | 33.00       | -16.82      | 3.86 H             | 208                  | 81.97            | -65.79                   |
| 2                                                   | 1880.00         | 15.79                             | 33.00       | -17.21      | 3.82 H             | 207                  | 81.40            | -65.61                   |
| 3                                                   | 1902.50         | 15.59                             | 33.00       | -17.41      | 3.88 H             | 207                  | 81.02            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 22.28                             | 33.00       | -10.72      | 1.78 V             | 321                  | 88.07            | -65.79                   |
| 2                                                   | 1880.00         | 22.35                             | 33.00       | -10.65      | 1.84 V             | 317                  | 87.96            | -65.61                   |
| 3                                                   | 1902.50         | 22.44                             | 33.00       | -10.56      | 1.83 V             | 320                  | 87.87            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 16.11                             | 33.00       | -16.89      | 3.87 H             | 212                  | 81.87            | -65.76                   |
| 2                                                   | 1880.00         | 16.07                             | 33.00       | -16.93      | 3.86 H             | 214                  | 81.68            | -65.61                   |
| 3                                                   | 1900.00         | 15.77                             | 33.00       | -17.23      | 3.91 H             | 212                  | 81.22            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 22.66                             | 33.00       | -10.34      | 1.82 V             | 322                  | 88.42            | -65.76                   |
| 2                                                   | 1880.00         | 22.89                             | 33.00       | -10.11      | 1.79 V             | 318                  | 88.50            | -65.61                   |
| 3                                                   | 1900.00         | 22.16                             | 33.00       | -10.84      | 1.78 V             | 322                  | 87.61            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

# Modulation Type: 256QAM

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 14.47                             | 33.00       | -18.53      | 3.88 H             | 212                  | 80.29            | -65.82                   |
| 2                                                   | 1880.00         | 14.64                             | 33.00       | -18.36      | 3.82 H             | 207                  | 80.25            | -65.61                   |
| 3                                                   | 1907.50         | 15.03                             | 33.00       | -17.97      | 3.86 H             | 212                  | 80.42            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 20.62                             | 33.00       | -12.38      | 1.76 V             | 317                  | 86.44            | -65.82                   |
| 2                                                   | 1880.00         | 21.03                             | 33.00       | -11.97      | 1.79 V             | 320                  | 86.64            | -65.61                   |
| 3                                                   | 1907.50         | 20.97                             | 33.00       | -12.03      | 1.78 V             | 322                  | 86.36            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 14.17                             | 33.00       | -18.83      | 3.88 H             | 211                  | 79.97            | -65.80                   |
| 2                                                   | 1880.00         | 14.66                             | 33.00       | -18.34      | 3.86 H             | 208                  | 80.27            | -65.61                   |
| 3                                                   | 1905.00         | 14.60                             | 33.00       | -18.40      | 3.90 H             | 214                  | 80.01            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 21.02                             | 33.00       | -11.98      | 1.77 V             | 322                  | 86.82            | -65.80                   |
| 2                                                   | 1880.00         | 20.80                             | 33.00       | -12.20      | 1.79 V             | 320                  | 86.41            | -65.61                   |
| 3                                                   | 1905.00         | 20.87                             | 33.00       | -12.13      | 1.76 V             | 317                  | 86.28            | -65.41                   |

## Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 14.78                             | 33.00       | -18.22      | 3.82 H             | 209                  | 80.57            | -65.79                   |
| 2                                                   | 1880.00         | 14.29                             | 33.00       | -18.71      | 3.92 H             | 208                  | 79.90            | -65.61                   |
| 3                                                   | 1902.50         | 14.09                             | 33.00       | -18.91      | 3.83 H             | 212                  | 79.52            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 20.68                             | 33.00       | -12.32      | 1.81 V             | 317                  | 86.47            | -65.79                   |
| 2                                                   | 1880.00         | 20.75                             | 33.00       | -12.25      | 1.78 V             | 320                  | 86.36            | -65.61                   |
| 3                                                   | 1902.50         | 21.04                             | 33.00       | -11.96      | 1.78 V             | 319                  | 86.47            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 14.71                             | 33.00       | -18.29      | 3.85 H             | 209                  | 80.47            | -65.76                   |
| 2                                                   | 1880.00         | 14.57                             | 33.00       | -18.43      | 3.91 H             | 207                  | 80.18            | -65.61                   |
| 3                                                   | 1900.00         | 14.37                             | 33.00       | -18.63      | 3.84 H             | 208                  | 79.82            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 21.26                             | 33.00       | -11.74      | 1.77 V             | 322                  | 87.02            | -65.76                   |
| 2                                                   | 1880.00         | 21.29                             | 33.00       | -11.71      | 1.79 V             | 318                  | 86.90            | -65.61                   |
| 3                                                   | 1900.00         | 20.66                             | 33.00       | -12.34      | 1.79 V             | 323                  | 86.11            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.











### Modulation Type: 64QAM

LTE Band 5, Channel Bandwidth 1.4MHz

|                                                      |                    |                                |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 20407, 20525, 20643 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm)                   | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 824.70             | 17.87                          | 38.45          | -20.58         | 1.12 H                   | 10                         | 91.45                  | -73.58                         |
| 2                                                    | 836.50             | 17.49                          | 38.45          | -20.96         | 1.14 H                   | 11                         | 90.94                  | -73.45                         |
| 3                                                    | 848.30             | 17.47                          | 38.45          | -20.98         | 1.10 H                   | 12                         | 90.90                  | -73.43                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm)                   | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 824.70             | 8.82                           | 38.45          | -29.63         | 1.17 V                   | 24                         | 82.40                  | -73.58                         |
| 2                                                    | 836.50             | 8.49                           | 38.45          | -29.96         | 1.17 V                   | 24                         | 81.94                  | -73.45                         |
| 3                                                    | 848.30             | 8.55                           | 38.45          | -29.90         | 1.23 V                   | 17                         | 81.98                  | -73.43                         |

LTE Band 5, Channel Bandwidth 3MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 20415, 20525, 20635 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 825.50          | 17.77                          | 38.45       | -20.68      | 1.12 H             | 10                   | 91.35            | -73.58                   |
| 2                                                    | 836.50          | 17.88                          | 38.45       | -20.57      | 1.15 H             | 9                    | 91.33            | -73.45                   |
| 3                                                    | 847.50          | 17.42                          | 38.45       | -21.03      | 1.06 H             | 7                    | 90.85            | -73.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 825.50          | 8.27                           | 38.45       | -30.18      | 1.25 V             | 17                   | 81.85            | -73.58                   |
| 2                                                    | 836.50          | 8.75                           | 38.45       | -29.70      | 1.17 V             | 23                   | 82.20            | -73.45                   |
| 3                                                    | 847.50          | 8.69                           | 38.45       | -29.76      | 1.15 V             | 23                   | 82.12            | -73.43                   |

Remarks:

1. ERP(dBm) = Reading(dBuV/m) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)  
+ 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value







## LTE Band 12

### Modulation Type: QPSK

LTE Band 12, Channel Bandwidth 1.4MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23017, 23095, 23173 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 699.70          | 23.82                          | 34.77       | -10.95      | 1.15 H             | 206                  | 91.43            | -67.61                   |
| 2                                                    | 707.50          | 23.75                          | 34.77       | -11.02      | 1.23 H             | 202                  | 91.28            | -67.53                   |
| 3                                                    | 715.30          | 23.81                          | 34.77       | -10.96      | 1.20 H             | 208                  | 91.16            | -67.35                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 699.70          | 15.34                          | 34.77       | -19.43      | 1.29 V             | 341                  | 82.95            | -67.61                   |
| 2                                                    | 707.50          | 15.48                          | 34.77       | -19.29      | 1.27 V             | 343                  | 83.01            | -67.53                   |
| 3                                                    | 715.30          | 15.40                          | 34.77       | -19.37      | 1.31 V             | 341                  | 82.75            | -67.35                   |

LTE Band 12, Channel Bandwidth 3MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23025, 23095, 23165 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 700.50          | 23.81                          | 34.77       | -10.96      | 1.21 H             | 203                  | 91.42            | -67.61                   |
| 2                                                    | 707.50          | 23.77                          | 34.77       | -11.00      | 1.16 H             | 205                  | 91.30            | -67.53                   |
| 3                                                    | 714.50          | 23.80                          | 34.77       | -10.97      | 1.16 H             | 203                  | 91.17            | -67.37                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 700.50          | 15.59                          | 34.77       | -19.18      | 1.31 V             | 341                  | 83.20            | -67.61                   |
| 2                                                    | 707.50          | 15.32                          | 34.77       | -19.45      | 1.32 V             | 345                  | 82.85            | -67.53                   |
| 3                                                    | 714.50          | 15.67                          | 34.77       | -19.10      | 1.33 V             | 345                  | 83.04            | -67.37                   |

#### Remarks:

1.  $ERP(dBm) = Reading(dBuV/m) + Correction Factor(dB/m)$
2.  $Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value















LTE Band 12, Channel Bandwidth 5MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23035, 23095, 23155 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 701.50          | 20.81                          | 34.77       | -13.96      | 1.15 H             | 209                  | 88.41            | -67.60                   |
| 2                                                    | 707.50          | 20.74                          | 34.77       | -14.03      | 1.19 H             | 206                  | 88.27            | -67.53                   |
| 3                                                    | 713.50          | 20.76                          | 34.77       | -14.01      | 1.14 H             | 206                  | 88.15            | -67.39                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 701.50          | 12.48                          | 34.77       | -22.29      | 1.29 V             | 340                  | 80.08            | -67.60                   |
| 2                                                    | 707.50          | 12.60                          | 34.77       | -22.17      | 1.30 V             | 339                  | 80.13            | -67.53                   |
| 3                                                    | 713.50          | 12.50                          | 34.77       | -22.27      | 1.26 V             | 342                  | 79.89            | -67.39                   |

LTE Band 12, Channel Bandwidth 10MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23060, 23095, 23130 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 704.00          | 20.80                          | 34.77       | -13.97      | 1.13 H             | 202                  | 88.38            | -67.58                   |
| 2                                                    | 707.50          | 20.76                          | 34.77       | -14.01      | 1.17 H             | 206                  | 88.29            | -67.53                   |
| 3                                                    | 711.00          | 20.69                          | 34.77       | -14.08      | 1.16 H             | 202                  | 88.14            | -67.45                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 704.00          | 12.29                          | 34.77       | -22.48      | 1.32 V             | 339                  | 79.87            | -67.58                   |
| 2                                                    | 707.50          | 12.53                          | 34.77       | -22.24      | 1.27 V             | 341                  | 80.06            | -67.53                   |
| 3                                                    | 711.00          | 12.30                          | 34.77       | -22.47      | 1.31 V             | 343                  | 79.75            | -67.45                   |

Remarks:

1.  $ERP(dBm) = Reading(dBuV/m) + Correction Factor(dB/m)$
2.  $Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$

## LTE Band 66

### Modulation Type: QPSK

LTE Band 66, Channel Bandwidth 1.4MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 131979, 132322, 132665 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1710.70         | 19.40                             | 30.00       | -10.60      | 1.48 H             | 50                   | 86.13            | -66.73                   |
| 2                                                    | 1745.00         | 19.57                             | 30.00       | -10.43      | 1.41 H             | 54                   | 86.22            | -66.65                   |
| 3                                                    | 1779.30         | 19.63                             | 30.00       | -10.37      | 1.41 H             | 54                   | 86.18            | -66.55                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1710.70         | 20.43                             | 30.00       | -9.57       | 1.58 V             | 267                  | 87.16            | -66.73                   |
| 2                                                    | 1745.00         | 20.43                             | 30.00       | -9.57       | 1.57 V             | 267                  | 87.08            | -66.65                   |
| 3                                                    | 1779.30         | 20.92                             | 30.00       | -9.08       | 1.58 V             | 266                  | 87.47            | -66.55                   |

LTE Band 66, Channel Bandwidth 3MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131987, 132322, 132657 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1711.50            | 19.09                             | 30.00          | -10.91         | 1.49 H                   | 49                         | 85.81                  | -66.72                         |
| 2                                                    | 1745.00            | 19.30                             | 30.00          | -10.70         | 1.43 H                   | 50                         | 85.95                  | -66.65                         |
| 3                                                    | 1778.50            | 19.30                             | 30.00          | -10.70         | 1.47 H                   | 53                         | 85.85                  | -66.55                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1711.50            | 20.61                             | 30.00          | -9.39          | 1.54 V                   | 266                        | 87.33                  | -66.72                         |
| 2                                                    | 1745.00            | 20.58                             | 30.00          | -9.42          | 1.61 V                   | 271                        | 87.23                  | -66.65                         |
| 3                                                    | 1778.50            | 20.88                             | 30.00          | -9.12          | 1.56 V                   | 270                        | 87.43                  | -66.55                         |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$



LTE Band 66, Channel Bandwidth 15MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 132047, 132322, 132597 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1717.50            | 19.26                             | 30.00          | -10.74         | 1.50 H                   | 52                         | 85.97                  | -66.71                         |
| 2                                                    | 1745.00            | 19.21                             | 30.00          | -10.79         | 1.45 H                   | 52                         | 85.86                  | -66.65                         |
| 3                                                    | 1772.50            | 19.40                             | 30.00          | -10.60         | 1.42 H                   | 49                         | 85.97                  | -66.57                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1717.50            | 20.74                             | 30.00          | -9.26          | 1.58 V                   | 266                        | 87.45                  | -66.71                         |
| 2                                                    | 1745.00            | 20.57                             | 30.00          | -9.43          | 1.61 V                   | 271                        | 87.22                  | -66.65                         |
| 3                                                    | 1772.50            | 20.91                             | 30.00          | -9.09          | 1.56 V                   | 267                        | 87.48                  | -66.57                         |

LTE Band 66, Channel Bandwidth 20MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 132072, 132322, 132572 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1720.00            | 19.24                             | 30.00          | -10.76         | 1.41 H                   | 49                         | 85.94                  | -66.70                         |
| 2                                                    | 1745.00            | 19.57                             | 30.00          | -10.43         | 1.42 H                   | 54                         | 86.22                  | -66.65                         |
| 3                                                    | 1770.00            | 19.39                             | 30.00          | -10.61         | 1.44 H                   | 50                         | 85.97                  | -66.58                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1720.00            | 20.88                             | 30.00          | -9.12          | 1.61 V                   | 268                        | 87.58                  | -66.70                         |
| 2                                                    | 1745.00            | 20.66                             | 30.00          | -9.34          | 1.56 V                   | 272                        | 87.31                  | -66.65                         |
| 3                                                    | 1770.00            | 20.81                             | 30.00          | -9.19          | 1.62 V                   | 269                        | 87.39                  | -66.58                         |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$



### Modulation Type: 16QAM

LTE Band 66, Channel Bandwidth 1.4MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131979, 132322, 132665 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 18.39                             | 30.00          | -11.61         | 1.49 H                   | 52                         | 85.12                  | -66.73                         |
| 2                                                    | 1745.00            | 18.56                             | 30.00          | -11.44         | 1.42 H                   | 51                         | 85.21                  | -66.65                         |
| 3                                                    | 1779.30            | 18.62                             | 30.00          | -11.38         | 1.45 H                   | 49                         | 85.17                  | -66.55                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 19.43                             | 30.00          | -10.57         | 1.61 V                   | 267                        | 86.16                  | -66.73                         |
| 2                                                    | 1745.00            | 19.44                             | 30.00          | -10.56         | 1.59 V                   | 271                        | 86.09                  | -66.65                         |
| 3                                                    | 1779.30            | 19.91                             | 30.00          | -10.09         | 1.56 V                   | 271                        | 86.46                  | -66.55                         |

LTE Band 66, Channel Bandwidth 3MHz

ETLE Band 66, Channel Bandwidth 5MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 131987, 132322, 132657 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 18.08                             | 30.00       | -11.92      | 1.49 H             | 48                   | 84.80            | -66.72                   |
| 2                                                    | 1745.00         | 18.30                             | 30.00       | -11.70      | 1.47 H             | 53                   | 84.95            | -66.65                   |
| 3                                                    | 1778.50         | 18.29                             | 30.00       | -11.71      | 1.50 H             | 51                   | 84.84            | -66.55                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 19.60                             | 30.00       | -10.40      | 1.61 V             | 266                  | 86.32            | -66.72                   |
| 2                                                    | 1745.00         | 19.57                             | 30.00       | -10.43      | 1.62 V             | 267                  | 86.22            | -66.65                   |
| 3                                                    | 1778.50         | 19.87                             | 30.00       | -10.13      | 1.58 V             | 271                  | 86.42            | -66.55                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$

LTE Band 66, Channel Bandwidth 5MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131997, 132322, 132647 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1712.50            | 18.32                             | 30.00          | -11.68         | 1.49 H                   | 52                         | 85.04                  | -66.72                         |
| 2                                                    | 1745.00            | 18.16                             | 30.00          | -11.84         | 1.47 H                   | 49                         | 84.81                  | -66.65                         |
| 3                                                    | 1777.50            | 18.37                             | 30.00          | -11.63         | 1.46 H                   | 54                         | 84.92                  | -66.55                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1712.50            | 19.71                             | 30.00          | -10.29         | 1.52 V                   | 279                        | 86.43                  | -66.72                         |
| 2                                                    | 1745.00            | 19.49                             | 30.00          | -10.51         | 1.58 V                   | 270                        | 86.14                  | -66.65                         |
| 3                                                    | 1777.50            | 19.96                             | 30.00          | -10.04         | 1.56 V                   | 272                        | 86.51                  | -66.55                         |

LTE Band 66, Channel Bandwidth 10MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 132022, 132322, 132622 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1715.00            | 18.63                             | 30.00          | -11.37         | 1.40 H                   | 48                         | 85.35                  | -66.72                         |
| 2                                                    | 1745.00            | 18.11                             | 30.00          | -11.89         | 1.47 H                   | 50                         | 84.76                  | -66.65                         |
| 3                                                    | 1775.00            | 18.29                             | 30.00          | -11.71         | 1.42 H                   | 53                         | 84.85                  | -66.56                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1715.00            | 19.66                             | 30.00          | -10.34         | 1.53 V                   | 266                        | 86.38                  | -66.72                         |
| 2                                                    | 1745.00            | 19.47                             | 30.00          | -10.53         | 1.59 V                   | 266                        | 86.12                  | -66.65                         |
| 3                                                    | 1775.00            | 19.97                             | 30.00          | -10.03         | 1.55 V                   | 271                        | 86.53                  | -66.56                         |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$

LTE Band 66, Channel Bandwidth 15MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 132047, 132322, 132597 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1717.50            | 18.28                             | 30.00          | -11.72         | 1.41 H                   | 53                         | 84.99                  | -66.71                         |
| 2                                                    | 1745.00            | 18.19                             | 30.00          | -11.81         | 1.46 H                   | 50                         | 84.84                  | -66.65                         |
| 3                                                    | 1772.50            | 18.42                             | 30.00          | -11.58         | 1.47 H                   | 48                         | 84.99                  | -66.57                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1717.50            | 19.73                             | 30.00          | -10.27         | 1.54 V                   | 271                        | 86.44                  | -66.71                         |
| 2                                                    | 1745.00            | 19.56                             | 30.00          | -10.44         | 1.53 V                   | 268                        | 86.21                  | -66.65                         |
| 3                                                    | 1772.50            | 19.92                             | 30.00          | -10.08         | 1.53 V                   | 269                        | 86.49                  | -66.57                         |

LTE Band 66, Channel Bandwidth 20MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 132072, 132322, 132572 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1720.00            | 18.26                             | 30.00          | -11.74         | 1.45 H                   | 52                         | 84.96                  | -66.70                         |
| 2                                                    | 1745.00            | 18.57                             | 30.00          | -11.43         | 1.50 H                   | 51                         | 85.22                  | -66.65                         |
| 3                                                    | 1770.00            | 18.37                             | 30.00          | -11.63         | 1.49 H                   | 47                         | 84.95                  | -66.58                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1720.00            | 19.90                             | 30.00          | -10.10         | 1.57 V                   | 267                        | 86.60                  | -66.70                         |
| 2                                                    | 1745.00            | 19.68                             | 30.00          | -10.32         | 1.58 V                   | 273                        | 86.33                  | -66.65                         |
| 3                                                    | 1770.00            | 19.80                             | 30.00          | -10.20         | 1.53 V                   | 269                        | 86.38                  | -66.58                         |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$

# Modulation Type: 64QAM

LTE Band 66, Channel Bandwidth 1.4MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131979, 132322, 132665 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 17.41                             | 30.00          | -12.59         | 1.41 H                   | 54                         | 84.14                  | -66.73                         |
| 2                                                    | 1745.00            | 17.56                             | 30.00          | -12.44         | 1.44 H                   | 51                         | 84.21                  | -66.65                         |
| 3                                                    | 1779.30            | 17.64                             | 30.00          | -12.36         | 1.41 H                   | 52                         | 84.19                  | -66.55                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 18.42                             | 30.00          | -11.58         | 1.54 V                   | 268                        | 85.15                  | -66.73                         |
| 2                                                    | 1745.00            | 18.43                             | 30.00          | -11.57         | 1.53 V                   | 270                        | 85.08                  | -66.65                         |
| 3                                                    | 1779.30            | 18.92                             | 30.00          | -11.08         | 1.60 V                   | 273                        | 85.47                  | -66.55                         |

LTE Band 66, Channel Bandwidth 3MHz

ETLE Band 66, Channel Bandwidth 5MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 131987, 132322, 132657 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 17.09                             | 30.00       | -12.91      | 1.46 H             | 48                   | 83.81            | -66.72                   |
| 2                                                    | 1745.00         | 17.29                             | 30.00       | -12.71      | 1.41 H             | 49                   | 83.94            | -66.65                   |
| 3                                                    | 1778.50         | 17.31                             | 30.00       | -12.69      | 1.49 H             | 47                   | 83.86            | -66.55                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 18.62                             | 30.00       | -11.38      | 1.59 V             | 271                  | 85.34            | -66.72                   |
| 2                                                    | 1745.00         | 18.59                             | 30.00       | -11.41      | 1.56 V             | 267                  | 85.24            | -66.65                   |
| 3                                                    | 1778.50         | 18.86                             | 30.00       | -11.14      | 1.58 V             | 268                  | 85.41            | -66.55                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$

# LTE Band 66, Channel Bandwidth 5MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131997, 132322, 132647 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1712.50            | 17.30                             | 30.00          | -12.70         | 1.48 H                   | 52                         | 84.02                  | -66.72                         |
| 2                                                    | 1745.00            | 17.15                             | 30.00          | -12.85         | 1.40 H                   | 54                         | 83.80                  | -66.65                         |
| 3                                                    | 1777.50            | 17.36                             | 30.00          | -12.64         | 1.50 H                   | 49                         | 83.91                  | -66.55                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1712.50            | 18.72                             | 30.00          | -11.28         | 1.59 V                   | 266                        | 85.44                  | -66.72                         |
| 2                                                    | 1745.00            | 18.51                             | 30.00          | -11.49         | 1.59 V                   | 268                        | 85.16                  | -66.65                         |
| 3                                                    | 1777.50            | 18.97                             | 30.00          | -11.03         | 1.52 V                   | 267                        | 85.52                  | -66.55                         |

# LTE Band 66, Channel Bandwidth 10MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 132022, 132322, 132622 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1715.00            | 17.61                             | 30.00          | -12.39         | 1.44 H                   | 51                         | 84.33                  | -66.72                         |
| 2                                                    | 1745.00            | 17.10                             | 30.00          | -12.90         | 1.43 H                   | 54                         | 83.75                  | -66.65                         |
| 3                                                    | 1775.00            | 17.27                             | 30.00          | -12.73         | 1.44 H                   | 51                         | 83.83                  | -66.56                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1715.00            | 18.65                             | 30.00          | -11.35         | 1.59 V                   | 272                        | 85.37                  | -66.72                         |
| 2                                                    | 1745.00            | 18.49                             | 30.00          | -11.51         | 1.56 V                   | 270                        | 85.14                  | -66.65                         |
| 3                                                    | 1775.00            | 18.98                             | 30.00          | -11.02         | 1.57 V                   | 269                        | 85.54                  | -66.56                         |

## Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$



# Modulation Type: 256QAM

LTE Band 66, Channel Bandwidth 1.4MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131979, 132322, 132665 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 16.40                             | 30.00          | -13.60         | 1.41 H                   | 49                         | 83.13                  | -66.73                         |
| 2                                                    | 1745.00            | 16.54                             | 30.00          | -13.46         | 1.46 H                   | 50                         | 83.19                  | -66.65                         |
| 3                                                    | 1779.30            | 16.63                             | 30.00          | -13.37         | 1.45 H                   | 53                         | 83.18                  | -66.55                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 17.44                             | 30.00          | -12.56         | 1.56 V                   | 273                        | 84.17                  | -66.73                         |
| 2                                                    | 1745.00            | 17.45                             | 30.00          | -12.55         | 1.62 V                   | 271                        | 84.10                  | -66.65                         |
| 3                                                    | 1779.30            | 17.94                             | 30.00          | -12.06         | 1.52 V                   | 270                        | 84.49                  | -66.55                         |

LTE Band 66, Channel Bandwidth 3MHz

ETLE Band 66, Channel Bandwidth 5MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 131987, 132322, 132657 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 16.07                             | 30.00       | -13.93      | 1.44 H             | 51                   | 82.79            | -66.72                   |
| 2                                                    | 1745.00         | 16.30                             | 30.00       | -13.70      | 1.44 H             | 47                   | 82.95            | -66.65                   |
| 3                                                    | 1778.50         | 16.32                             | 30.00       | -13.68      | 1.43 H             | 54                   | 82.87            | -66.55                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 17.63                             | 30.00       | -12.37      | 1.62 V             | 272                  | 84.35            | -66.72                   |
| 2                                                    | 1745.00         | 17.57                             | 30.00       | -12.43      | 1.57 V             | 268                  | 84.22            | -66.65                   |
| 3                                                    | 1778.50         | 17.85                             | 30.00       | -12.15      | 1.52 V             | 268                  | 84.40            | -66.55                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$







# External Antenna

Modulation Type:  $\pi/2$  BPSK

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 17.43                             | 33.00       | -15.57      | 3.54 H             | 130                  | 83.25            | -65.82                   |
| 2                                                   | 1880.00         | 17.68                             | 33.00       | -15.32      | 3.56 H             | 133                  | 83.29            | -65.61                   |
| 3                                                   | 1907.50         | 17.21                             | 33.00       | -15.79      | 3.56 H             | 134                  | 82.60            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 23.03                             | 33.00       | -9.97       | 1.31 V             | 223                  | 88.85            | -65.82                   |
| 2                                                   | 1880.00         | 23.09                             | 33.00       | -9.91       | 1.27 V             | 225                  | 88.70            | -65.61                   |
| 3                                                   | 1907.50         | 22.92                             | 33.00       | -10.08      | 1.32 V             | 220                  | 88.31            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 17.21                             | 33.00       | -15.79      | 3.58 H             | 133                  | 83.01            | -65.80                   |
| 2                                                   | 1880.00         | 17.44                             | 33.00       | -15.56      | 3.49 H             | 131                  | 83.05            | -65.61                   |
| 3                                                   | 1905.00         | 17.31                             | 33.00       | -15.69      | 3.56 H             | 131                  | 82.72            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 23.08                             | 33.00       | -9.92       | 1.30 V             | 224                  | 88.88            | -65.80                   |
| 2                                                   | 1880.00         | 23.20                             | 33.00       | -9.80       | 1.27 V             | 224                  | 88.81            | -65.61                   |
| 3                                                   | 1905.00         | 23.25                             | 33.00       | -9.75       | 1.30 V             | 219                  | 88.66            | -65.41                   |

## Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 17.80                             | 33.00       | -15.20      | 3.55 H             | 131                  | 83.59            | -65.79                   |
| 2                                                   | 1880.00         | 17.82                             | 33.00       | -15.18      | 3.58 H             | 132                  | 83.43            | -65.61                   |
| 3                                                   | 1902.50         | 17.55                             | 33.00       | -15.45      | 3.57 H             | 132                  | 82.98            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 23.00                             | 33.00       | -10.00      | 1.26 V             | 218                  | 88.79            | -65.79                   |
| 2                                                   | 1880.00         | 22.72                             | 33.00       | -10.28      | 1.31 V             | 224                  | 88.33            | -65.61                   |
| 3                                                   | 1902.50         | 23.07                             | 33.00       | -9.93       | 1.32 V             | 218                  | 88.50            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 17.64                             | 33.00       | -15.36      | 3.55 H             | 135                  | 83.40            | -65.76                   |
| 2                                                   | 1880.00         | 17.25                             | 33.00       | -15.75      | 3.49 H             | 129                  | 82.86            | -65.61                   |
| 3                                                   | 1900.00         | 17.81                             | 33.00       | -15.19      | 3.58 H             | 134                  | 83.26            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 23.18                             | 33.00       | -9.82       | 1.27 V             | 218                  | 88.94            | -65.76                   |
| 2                                                   | 1880.00         | 23.17                             | 33.00       | -9.83       | 1.35 V             | 223                  | 88.78            | -65.61                   |
| 3                                                   | 1900.00         | 22.68                             | 33.00       | -10.32      | 1.35 V             | 218                  | 88.13            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

## Modulation Type: QPSK

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 17.93                             | 33.00       | -15.07      | 3.54 H             | 130                  | 83.75            | -65.82                   |
| 2                                                   | 1880.00         | 18.18                             | 33.00       | -14.82      | 3.56 H             | 133                  | 83.79            | -65.61                   |
| 3                                                   | 1907.50         | 17.81                             | 33.00       | -15.19      | 3.56 H             | 134                  | 83.20            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 23.43                             | 33.00       | -9.57       | 1.31 V             | 223                  | 89.25            | -65.82                   |
| 2                                                   | 1880.00         | 23.39                             | 33.00       | -9.61       | 1.27 V             | 225                  | 89.00            | -65.61                   |
| 3                                                   | 1907.50         | 23.24                             | 33.00       | -9.76       | 1.32 V             | 220                  | 88.63            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 17.51                             | 33.00       | -15.49      | 3.58 H             | 133                  | 83.31            | -65.80                   |
| 2                                                   | 1880.00         | 17.84                             | 33.00       | -15.16      | 3.49 H             | 131                  | 83.45            | -65.61                   |
| 3                                                   | 1905.00         | 17.91                             | 33.00       | -15.09      | 3.56 H             | 131                  | 83.32            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 23.38                             | 33.00       | -9.62       | 1.30 V             | 224                  | 89.18            | -65.80                   |
| 2                                                   | 1880.00         | 23.50                             | 33.00       | -9.50       | 1.27 V             | 224                  | 89.11            | -65.61                   |
| 3                                                   | 1905.00         | 23.65                             | 33.00       | -9.35       | 1.30 V             | 219                  | 89.06            | -65.41                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 18.23                             | 33.00       | -14.77      | 3.55 H             | 131                  | 84.02            | -65.79                   |
| 2                                                   | 1880.00         | 18.24                             | 33.00       | -14.76      | 3.58 H             | 132                  | 83.85            | -65.61                   |
| 3                                                   | 1902.50         | 18.05                             | 33.00       | -14.95      | 3.57 H             | 132                  | 83.48            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 23.42                             | 33.00       | -9.58       | 1.26 V             | 218                  | 89.21            | -65.79                   |
| 2                                                   | 1880.00         | 23.23                             | 33.00       | -9.77       | 1.31 V             | 224                  | 88.84            | -65.61                   |
| 3                                                   | 1902.50         | 23.37                             | 33.00       | -9.63       | 1.32 V             | 218                  | 88.80            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 17.94                             | 33.00       | -15.06      | 3.55 H             | 135                  | 83.70            | -65.76                   |
| 2                                                   | 1880.00         | 17.55                             | 33.00       | -15.45      | 3.49 H             | 129                  | 83.16            | -65.61                   |
| 3                                                   | 1900.00         | 18.12                             | 33.00       | -14.88      | 3.58 H             | 134                  | 83.57            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 23.58                             | 33.00       | -9.42       | 1.27 V             | 218                  | 89.34            | -65.76                   |
| 2                                                   | 1880.00         | 23.47                             | 33.00       | -9.53       | 1.35 V             | 223                  | 89.08            | -65.61                   |
| 3                                                   | 1900.00         | 22.98                             | 33.00       | -10.02      | 1.35 V             | 218                  | 88.43            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

### Modulation Type: 16QAM

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 16.66                             | 33.00       | -16.34      | 3.58 H             | 128                  | 82.48            | -65.82                   |
| 2                                                   | 1880.00         | 16.96                             | 33.00       | -16.04      | 3.56 H             | 131                  | 82.57            | -65.61                   |
| 3                                                   | 1907.50         | 17.28                             | 33.00       | -15.72      | 3.55 H             | 130                  | 82.67            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 21.85                             | 33.00       | -11.15      | 1.32 V             | 219                  | 87.67            | -65.82                   |
| 2                                                   | 1880.00         | 21.85                             | 33.00       | -11.15      | 1.30 V             | 220                  | 87.46            | -65.61                   |
| 3                                                   | 1907.50         | 21.11                             | 33.00       | -11.89      | 1.31 V             | 218                  | 86.50            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 16.50                             | 33.00       | -16.50      | 3.48 H             | 130                  | 82.30            | -65.80                   |
| 2                                                   | 1880.00         | 16.82                             | 33.00       | -16.18      | 3.54 H             | 128                  | 82.43            | -65.61                   |
| 3                                                   | 1905.00         | 16.89                             | 33.00       | -16.11      | 3.52 H             | 134                  | 82.30            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 22.38                             | 33.00       | -10.62      | 1.28 V             | 223                  | 88.18            | -65.80                   |
| 2                                                   | 1880.00         | 22.48                             | 33.00       | -10.52      | 1.32 V             | 218                  | 88.09            | -65.61                   |
| 3                                                   | 1905.00         | 22.67                             | 33.00       | -10.33      | 1.26 V             | 219                  | 88.10            | -65.43                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 17.24                             | 33.00       | -15.76      | 3.48 H             | 133                  | 83.03            | -65.79                   |
| 2                                                   | 1880.00         | 17.22                             | 33.00       | -15.78      | 3.53 H             | 135                  | 82.83            | -65.61                   |
| 3                                                   | 1902.50         | 17.07                             | 33.00       | -15.93      | 3.50 H             | 129                  | 82.50            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 22.44                             | 33.00       | -10.56      | 1.33 V             | 220                  | 88.23            | -65.79                   |
| 2                                                   | 1880.00         | 22.21                             | 33.00       | -10.79      | 1.34 V             | 219                  | 87.82            | -65.61                   |
| 3                                                   | 1902.50         | 22.35                             | 33.00       | -10.65      | 1.34 V             | 219                  | 87.78            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 16.93                             | 33.00       | -16.07      | 3.57 H             | 132                  | 82.69            | -65.76                   |
| 2                                                   | 1880.00         | 16.54                             | 33.00       | -16.46      | 3.48 H             | 130                  | 82.15            | -65.61                   |
| 3                                                   | 1900.00         | 17.11                             | 33.00       | -15.89      | 3.52 H             | 134                  | 82.56            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 22.57                             | 33.00       | -10.43      | 1.27 V             | 220                  | 88.33            | -65.76                   |
| 2                                                   | 1880.00         | 22.47                             | 33.00       | -10.53      | 1.35 V             | 220                  | 88.08            | -65.61                   |
| 3                                                   | 1900.00         | 21.97                             | 33.00       | -11.03      | 1.27 V             | 219                  | 87.42            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

# Modulation Type: 64QAM

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 15.64                             | 33.00       | -17.36      | 3.57 H             | 129                  | 81.46            | -65.82                   |
| 2                                                   | 1880.00         | 15.98                             | 33.00       | -17.02      | 3.50 H             | 128                  | 81.59            | -65.61                   |
| 3                                                   | 1907.50         | 16.30                             | 33.00       | -16.70      | 3.54 H             | 133                  | 81.69            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 20.83                             | 33.00       | -12.17      | 1.27 V             | 218                  | 86.65            | -65.82                   |
| 2                                                   | 1880.00         | 20.87                             | 33.00       | -12.13      | 1.31 V             | 220                  | 86.48            | -65.61                   |
| 3                                                   | 1907.50         | 21.13                             | 33.00       | -11.87      | 1.34 V             | 222                  | 86.52            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 15.48                             | 33.00       | -17.52      | 3.51 H             | 135                  | 81.28            | -65.80                   |
| 2                                                   | 1880.00         | 15.82                             | 33.00       | -17.18      | 3.49 H             | 131                  | 81.43            | -65.61                   |
| 3                                                   | 1905.00         | 15.90                             | 33.00       | -17.10      | 3.56 H             | 128                  | 81.31            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 21.39                             | 33.00       | -11.61      | 1.28 V             | 225                  | 87.19            | -65.80                   |
| 2                                                   | 1880.00         | 21.48                             | 33.00       | -11.52      | 1.33 V             | 224                  | 87.09            | -65.61                   |
| 3                                                   | 1905.00         | 21.66                             | 33.00       | -11.34      | 1.34 V             | 218                  | 87.07            | -65.41                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.



n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 16.22                             | 33.00       | -16.78      | 3.51 H             | 132                  | 82.01            | -65.79                   |
| 2                                                   | 1880.00         | 16.22                             | 33.00       | -16.78      | 3.55 H             | 131                  | 81.83            | -65.61                   |
| 3                                                   | 1902.50         | 16.08                             | 33.00       | -16.92      | 3.51 H             | 133                  | 81.51            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 21.43                             | 33.00       | -11.57      | 1.25 V             | 224                  | 87.22            | -65.79                   |
| 2                                                   | 1880.00         | 21.21                             | 33.00       | -11.79      | 1.31 V             | 225                  | 86.82            | -65.61                   |
| 3                                                   | 1902.50         | 21.34                             | 33.00       | -11.66      | 1.32 V             | 222                  | 86.77            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 15.93                             | 33.00       | -17.07      | 3.56 H             | 131                  | 81.69            | -65.76                   |
| 2                                                   | 1880.00         | 15.52                             | 33.00       | -17.48      | 3.53 H             | 131                  | 81.13            | -65.61                   |
| 3                                                   | 1900.00         | 16.12                             | 33.00       | -16.88      | 3.48 H             | 133                  | 81.57            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 21.57                             | 33.00       | -11.43      | 1.32 V             | 222                  | 87.33            | -65.76                   |
| 2                                                   | 1880.00         | 21.47                             | 33.00       | -11.53      | 1.28 V             | 222                  | 87.08            | -65.61                   |
| 3                                                   | 1900.00         | 20.97                             | 33.00       | -12.03      | 1.33 V             | 225                  | 86.42            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

# Modulation Type: 256QAM

n2, Channel Bandwidth: 5MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 370500, 376000, 381500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 14.66                             | 33.00       | -18.34      | 3.53 H             | 128                  | 80.48            | -65.82                   |
| 2                                                   | 1880.00         | 14.97                             | 33.00       | -18.03      | 3.57 H             | 128                  | 80.58            | -65.61                   |
| 3                                                   | 1907.50         | 15.29                             | 33.00       | -17.71      | 3.51 H             | 135                  | 80.68            | -65.39                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1852.50         | 19.81                             | 33.00       | -13.19      | 1.35 V             | 223                  | 85.63            | -65.82                   |
| 2                                                   | 1880.00         | 19.88                             | 33.00       | -13.12      | 1.26 V             | 220                  | 85.49            | -65.61                   |
| 3                                                   | 1907.50         | 20.13                             | 33.00       | -12.87      | 1.29 V             | 223                  | 85.52            | -65.39                   |

n2, Channel Bandwidth: 10MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371000, 376000, 381000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 14.46                             | 33.00       | -18.54      | 3.53 H             | 132                  | 80.26            | -65.80                   |
| 2                                                   | 1880.00         | 14.84                             | 33.00       | -18.16      | 3.54 H             | 134                  | 80.45            | -65.61                   |
| 3                                                   | 1905.00         | 14.92                             | 33.00       | -18.08      | 3.55 H             | 133                  | 80.33            | -65.41                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1855.00         | 20.41                             | 33.00       | -12.59      | 1.35 V             | 224                  | 86.21            | -65.80                   |
| 2                                                   | 1880.00         | 20.49                             | 33.00       | -12.51      | 1.26 V             | 221                  | 86.10            | -65.61                   |
| 3                                                   | 1905.00         | 20.64                             | 33.00       | -12.36      | 1.35 V             | 219                  | 86.05            | -65.41                   |

## Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

n2, Channel Bandwidth: 15MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 371500, 376000, 380500 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 15.20                             | 33.00       | -17.80      | 3.49 H             | 129                  | 80.99            | -65.79                   |
| 2                                                   | 1880.00         | 15.20                             | 33.00       | -17.80      | 3.52 H             | 133                  | 80.81            | -65.61                   |
| 3                                                   | 1902.50         | 15.08                             | 33.00       | -17.92      | 3.50 H             | 133                  | 80.51            | -65.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1857.50         | 20.43                             | 33.00       | -12.57      | 1.30 V             | 221                  | 86.22            | -65.79                   |
| 2                                                   | 1880.00         | 20.19                             | 33.00       | -12.81      | 1.34 V             | 225                  | 85.80            | -65.61                   |
| 3                                                   | 1902.50         | 20.35                             | 33.00       | -12.65      | 1.35 V             | 223                  | 85.78            | -65.43                   |

n2, Channel Bandwidth: 20MHz

|                                                     |                 |                                   |             |             |                    |                      |                  |                          |
|-----------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                |                 | TX channel 372000, 376000, 380000 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance: Horizontal at 3 M |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 14.93                             | 33.00       | -18.07      | 3.55 H             | 133                  | 80.69            | -65.76                   |
| 2                                                   | 1880.00         | 14.51                             | 33.00       | -18.49      | 3.51 H             | 129                  | 80.12            | -65.61                   |
| 3                                                   | 1900.00         | 15.12                             | 33.00       | -17.88      | 3.55 H             | 135                  | 80.57            | -65.45                   |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                 |                                   |             |             |                    |                      |                  |                          |
| No.                                                 | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                   | 1860.00         | 20.57                             | 33.00       | -12.43      | 1.27 V             | 220                  | 86.33            | -65.76                   |
| 2                                                   | 1880.00         | 20.49                             | 33.00       | -12.51      | 1.33 V             | 218                  | 86.10            | -65.61                   |
| 3                                                   | 1900.00         | 19.98                             | 33.00       | -13.02      | 1.34 V             | 225                  | 85.43            | -65.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

## LTE Band 5

### Modulation Type: QPSK

LTE Band 5, Channel Bandwidth 1.4MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 20407, 20525, 20643 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 824.70          | 19.50                          | 38.45       | -18.95      | 1.09 H             | 25                   | 93.08            | -73.58                   |
| 2                                                    | 836.50          | 19.32                          | 38.45       | -19.13      | 1.18 H             | 26                   | 92.77            | -73.45                   |
| 3                                                    | 848.30          | 19.30                          | 38.45       | -19.15      | 1.18 H             | 28                   | 92.73            | -73.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 824.70          | 11.02                          | 38.45       | -27.43      | 1.25 V             | 12                   | 84.60            | -73.58                   |
| 2                                                    | 836.50          | 10.89                          | 38.45       | -27.56      | 1.27 V             | 12                   | 84.34            | -73.45                   |
| 3                                                    | 848.30          | 11.03                          | 38.45       | -27.42      | 1.30 V             | 19                   | 84.46            | -73.43                   |

LTE Band 5, Channel Bandwidth 3MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 20415, 20525, 20635 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 825.50          | 19.42                          | 38.45       | -19.03      | 1.18 H             | 22                   | 93.00            | -73.58                   |
| 2                                                    | 836.50          | 19.45                          | 38.45       | -19.00      | 1.15 H             | 24                   | 92.90            | -73.45                   |
| 3                                                    | 847.50          | 19.49                          | 38.45       | -18.96      | 1.14 H             | 26                   | 92.92            | -73.43                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 825.50          | 11.09                          | 38.45       | -27.36      | 1.28 V             | 17                   | 84.67            | -73.58                   |
| 2                                                    | 836.50          | 11.20                          | 38.45       | -27.25      | 1.24 V             | 16                   | 84.65            | -73.45                   |
| 3                                                    | 847.50          | 10.99                          | 38.45       | -27.46      | 1.28 V             | 18                   | 84.42            | -73.43                   |

Remarks:

1.  $ERP(dBm) = Reading(dBuV/m) + Correction Factor(dB/m)$
2.  $Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$

















## LTE Band 12

### Modulation Type: QPSK

LTE Band 12, Channel Bandwidth 1.4MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23017, 23095, 23173 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 699.70          | 14.98                          | 34.77       | -19.79      | 1.23 H             | 256                  | 90.21            | -75.23                   |
| 2                                                    | 707.50          | 15.05                          | 34.77       | -19.72      | 1.25 H             | 262                  | 90.24            | -75.19                   |
| 3                                                    | 715.30          | 15.20                          | 34.77       | -19.57      | 1.25 H             | 261                  | 90.26            | -75.06                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 699.70          | 18.66                          | 34.77       | -16.11      | 1.57 V             | 193                  | 93.89            | -75.23                   |
| 2                                                    | 707.50          | 18.76                          | 34.77       | -16.01      | 1.58 V             | 192                  | 93.95            | -75.19                   |
| 3                                                    | 715.30          | 18.49                          | 34.77       | -16.28      | 1.57 V             | 197                  | 93.55            | -75.06                   |

LTE Band 12, Channel Bandwidth 3MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23025, 23095, 23165 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 700.50          | 15.22                          | 34.77       | -19.55      | 1.27 H             | 260                  | 90.44            | -75.22                   |
| 2                                                    | 707.50          | 15.26                          | 34.77       | -19.51      | 1.21 H             | 262                  | 90.45            | -75.19                   |
| 3                                                    | 714.50          | 15.14                          | 34.77       | -19.63      | 1.21 H             | 260                  | 90.22            | -75.08                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 700.50          | 18.56                          | 34.77       | -16.21      | 1.56 V             | 193                  | 93.78            | -75.22                   |
| 2                                                    | 707.50          | 18.47                          | 34.77       | -16.30      | 1.53 V             | 190                  | 93.66            | -75.19                   |
| 3                                                    | 714.50          | 18.72                          | 34.77       | -16.05      | 1.51 V             | 195                  | 93.80            | -75.08                   |

#### Remarks:

1.  $ERP(dBm) = Reading(dBuV/m) + Correction Factor(dB/m)$
2.  $Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value











LTE Band 12, Channel Bandwidth 5MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23035, 23095, 23155 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 701.50          | 12.94                          | 34.77       | -21.83      | 1.22 H             | 261                  | 88.15            | -75.21                   |
| 2                                                    | 707.50          | 13.05                          | 34.77       | -21.72      | 1.26 H             | 262                  | 88.24            | -75.19                   |
| 3                                                    | 713.50          | 13.19                          | 34.77       | -21.58      | 1.18 H             | 260                  | 88.29            | -75.10                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 701.50          | 16.66                          | 34.77       | -18.11      | 1.53 V             | 190                  | 91.87            | -75.21                   |
| 2                                                    | 707.50          | 16.65                          | 34.77       | -18.12      | 1.51 V             | 194                  | 91.84            | -75.19                   |
| 3                                                    | 713.50          | 16.64                          | 34.77       | -18.13      | 1.55 V             | 197                  | 91.74            | -75.10                   |

LTE Band 12, Channel Bandwidth 10MHz

FE Band 12, Channel Bandwidth 10MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23060, 23095, 23130 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 704.00          | 12.92                          | 34.77       | -21.85      | 1.17 H             | 262                  | 88.11            | -75.19                   |
| 2                                                    | 707.50          | 13.26                          | 34.77       | -21.51      | 1.25 H             | 262                  | 88.45            | -75.19                   |
| 3                                                    | 711.00          | 13.05                          | 34.77       | -21.72      | 1.25 H             | 259                  | 88.21            | -75.16                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 704.00          | 16.71                          | 34.77       | -18.06      | 1.55 V             | 193                  | 91.90            | -75.19                   |
| 2                                                    | 707.50          | 16.52                          | 34.77       | -18.25      | 1.59 V             | 197                  | 91.71            | -75.19                   |
| 3                                                    | 711.00          | 16.73                          | 34.77       | -18.04      | 1.60 V             | 193                  | 91.89            | -75.16                   |

Remarks:

1.  $ERP(dBm) = Reading(dBuV/m) + Correction Factor(dB/m)$
2.  $Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) - Pre-Amplifier Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$

# Modulation Type: 256QAM

LTE Band 12, Channel Bandwidth 1.4MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23017, 23095, 23173 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 699.70          | 12.00                          | 34.77       | -22.77      | 1.23 H             | 256                  | 87.23            | -75.23                   |
| 2                                                    | 707.50          | 12.02                          | 34.77       | -22.75      | 1.24 H             | 256                  | 87.21            | -75.19                   |
| 3                                                    | 715.30          | 12.19                          | 34.77       | -22.58      | 1.20 H             | 260                  | 87.25            | -75.06                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 699.70          | 15.67                          | 34.77       | -19.10      | 1.61 V             | 195                  | 90.90            | -75.23                   |
| 2                                                    | 707.50          | 15.78                          | 34.77       | -18.99      | 1.55 V             | 190                  | 90.97            | -75.19                   |
| 3                                                    | 715.30          | 15.49                          | 34.77       | -19.28      | 1.59 V             | 195                  | 90.55            | -75.06                   |

LTE Band 12, Channel Bandwidth 3MHz

|                                                      |                 |                                |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|--------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| MODE                                                 |                 | TX channel 23025, 23095, 23165 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 700.50          | 12.23                          | 34.77       | -22.54      | 1.19 H             | 258                  | 87.45            | -75.22                   |
| 2                                                    | 707.50          | 12.25                          | 34.77       | -22.52      | 1.18 H             | 257                  | 87.44            | -75.19                   |
| 3                                                    | 714.50          | 12.17                          | 34.77       | -22.60      | 1.23 H             | 256                  | 87.25            | -75.08                   |
| Antenna Polarity & Test Distance : Vertical at 3m    |                 |                                |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | ERP (dBm)                      | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Reading (dBuV/m) | Correction Factor (dB/m) |
| 1                                                    | 700.50          | 15.60                          | 34.77       | -19.17      | 1.61 V             | 194                  | 90.80            | -75.20                   |
| 2                                                    | 707.50          | 15.50                          | 34.77       | -19.27      | 1.52 V             | 193                  | 90.70            | -75.20                   |
| 3                                                    | 714.50          | 15.70                          | 34.77       | -19.07      | 1.52 V             | 194                  | 90.90            | -75.20                   |

Remarks:

- ERP(dBm) = Reading(dBuV/m) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)  
+ 20log(D) – 104.8 - 2.15
- Margin value = ERP – Limit value



## LTE Band 66

### Modulation Type: QPSK

LTE Band 66, Channel Bandwidth 1.4MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131979, 132322, 132665 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 16.90                             | 30.00          | -13.10         | 2.88 H                   | 44                         | 83.40                  | -66.50                         |
| 2                                                    | 1745.00            | 17.10                             | 30.00          | -12.90         | 2.81 H                   | 60                         | 83.50                  | -66.40                         |
| 3                                                    | 1779.30            | 16.80                             | 30.00          | -13.20         | 2.85 H                   | 59                         | 83.10                  | -66.30                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 18.90                             | 30.00          | -11.10         | 2.29 V                   | 120                        | 85.40                  | -66.50                         |
| 2                                                    | 1745.00            | 19.30                             | 30.00          | -10.70         | 2.01 V                   | 126                        | 85.70                  | -66.40                         |
| 3                                                    | 1779.30            | 19.20                             | 30.00          | -10.80         | 1.90 V                   | 119                        | 85.50                  | -66.30                         |

LTE Band 66, Channel Bandwidth 3MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131987, 132322, 132657 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1711.50            | 16.00                             | 30.00          | -14.00         | 2.99 H                   | 40                         | 82.50                  | -66.50                         |
| 2                                                    | 1745.00            | 16.30                             | 30.00          | -13.70         | 3.01 H                   | 49                         | 82.70                  | -66.40                         |
| 3                                                    | 1778.50            | 16.20                             | 30.00          | -13.80         | 2.98 H                   | 55                         | 82.50                  | -66.30                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1711.50            | 18.80                             | 30.00          | -11.20         | 1.92 V                   | 90                         | 85.30                  | -66.50                         |
| 2                                                    | 1745.00            | 19.30                             | 30.00          | -10.70         | 1.90 V                   | 101                        | 85.70                  | -66.40                         |
| 3                                                    | 1778.50            | 19.10                             | 30.00          | -10.90         | 1.86 V                   | 110                        | 85.40                  | -66.30                         |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$





### Modulation Type: 16QAM

LTE Band 66, Channel Bandwidth 1.4MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 131979, 132322, 132665 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1710.70         | 15.90                             | 30.00       | -14.10      | 2.88 H             | 44                   | 82.40            | -66.50                   |
| 2                                                    | 1745.00         | 16.10                             | 30.00       | -13.90      | 2.81 H             | 60                   | 82.50            | -66.40                   |
| 3                                                    | 1779.30         | 15.80                             | 30.00       | -14.20      | 2.85 H             | 59                   | 82.10            | -66.30                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1710.70         | 17.90                             | 30.00       | -12.10      | 2.29 V             | 120                  | 84.40            | -66.50                   |
| 2                                                    | 1745.00         | 18.30                             | 30.00       | -11.70      | 2.01 V             | 126                  | 84.70            | -66.40                   |
| 3                                                    | 1779.30         | 18.20                             | 30.00       | -11.80      | 1.90 V             | 119                  | 84.50            | -66.30                   |

LTE Band 66, Channel Bandwidth 3MHz

LTE Band 66, Channel Bandwidth 5MHz

| Mode                                                 |                 | TX channel 131987, 132322, 132657 |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 15.00                             | 30.00       | -15.00      | 2.99 H             | 40                   | 81.50            | -66.50                   |
| 2                                                    | 1745.00         | 15.30                             | 30.00       | -14.70      | 3.01 H             | 49                   | 81.70            | -66.40                   |
| 3                                                    | 1778.50         | 15.20                             | 30.00       | -14.80      | 2.98 H             | 55                   | 81.50            | -66.30                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 17.80                             | 30.00       | -12.20      | 1.92 V             | 90                   | 84.30            | -66.50                   |
| 2                                                    | 1745.00         | 18.30                             | 30.00       | -11.70      | 1.90 V             | 101                  | 84.70            | -66.40                   |
| 3                                                    | 1778.50         | 18.10                             | 30.00       | -11.90      | 1.86 V             | 110                  | 84.40            | -66.30                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$







# Modulation Type: 64QAM

LTE Band 66, Channel Bandwidth 1.4MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 131979, 132322, 132665 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 15.20                             | 30.00          | -14.80         | 2.88 H                   | 44                         | 81.70                  | -66.50                         |
| 2                                                    | 1745.00            | 15.30                             | 30.00          | -14.70         | 2.81 H                   | 60                         | 81.70                  | -66.40                         |
| 3                                                    | 1779.30            | 15.00                             | 30.00          | -15.00         | 2.85 H                   | 59                         | 81.30                  | -66.30                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1710.70            | 17.00                             | 30.00          | -13.00         | 2.29 V                   | 120                        | 83.50                  | -66.50                         |
| 2                                                    | 1745.00            | 17.40                             | 30.00          | -12.60         | 2.01 V                   | 126                        | 83.80                  | -66.40                         |
| 3                                                    | 1779.30            | 17.30                             | 30.00          | -12.70         | 1.90 V                   | 119                        | 83.60                  | -66.30                         |

LTE Band 66, Channel Bandwidth 3MHz

ETLE Band 66, Channel Bandwidth 5MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 131987, 132322, 132657 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 14.20                             | 30.00       | -15.80      | 2.99 H             | 40                   | 80.70            | -66.50                   |
| 2                                                    | 1745.00         | 14.50                             | 30.00       | -15.50      | 3.01 H             | 49                   | 80.90            | -66.40                   |
| 3                                                    | 1778.50         | 14.40                             | 30.00       | -15.60      | 2.98 H             | 55                   | 80.70            | -66.30                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 17.00                             | 30.00       | -13.00      | 1.92 V             | 90                   | 83.50            | -66.50                   |
| 2                                                    | 1745.00         | 17.40                             | 30.00       | -12.60      | 1.90 V             | 101                  | 83.80            | -66.40                   |
| 3                                                    | 1778.50         | 17.20                             | 30.00       | -12.80      | 1.86 V             | 110                  | 83.50            | -66.30                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$



# LTE Band 66, Channel Bandwidth 15MHz

|                                                      |                    |                                   |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|-----------------------------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| Mode                                                 |                    | TX channel 132047, 132322, 132597 |                |                |                          |                            |                        |                                |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1717.50            | 14.00                             | 30.00          | -16.00         | 3.50 H                   | 31                         | 80.50                  | -66.50                         |
| 2                                                    | 1745.00            | 14.50                             | 30.00          | -15.50         | 3.44 H                   | 29                         | 80.90                  | -66.40                         |
| 3                                                    | 1772.50            | 14.30                             | 30.00          | -15.70         | 3.38 H                   | 35                         | 80.60                  | -66.30                         |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                    |                                   |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | EIRP<br>(dBm)                     | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1717.50            | 17.40                             | 30.00          | -12.60         | 2.08 V                   | 146                        | 83.90                  | -66.50                         |
| 2                                                    | 1745.00            | 17.70                             | 30.00          | -12.30         | 1.96 V                   | 140                        | 84.10                  | -66.40                         |
| 3                                                    | 1772.50            | 17.50                             | 30.00          | -12.50         | 1.90 V                   | 123                        | 83.80                  | -66.30                         |

# LTE Band 66, Channel Bandwidth 20MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 132072, 132322, 132572 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1720.00         | 14.80                             | 30.00       | -15.20      | 3.11 H             | 50                   | 81.30            | -66.50                   |
| 2                                                    | 1745.00         | 14.90                             | 30.00       | -15.10      | 3.26 H             | 63                   | 81.30            | -66.40                   |
| 3                                                    | 1770.00         | 14.50                             | 30.00       | -15.50      | 3.60 H             | 68                   | 80.80            | -66.30                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1720.00         | 17.70                             | 30.00       | -12.30      | 2.19 V             | 110                  | 84.20            | -66.50                   |
| 2                                                    | 1745.00         | 18.00                             | 30.00       | -12.00      | 2.01 V             | 156                  | 84.40            | -66.40                   |
| 3                                                    | 1770.00         | 17.80                             | 30.00       | -12.20      | 1.93 V             | 140                  | 84.10            | -66.30                   |

## Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$

# Modulation Type: 256QAM

LTE Band 66, Channel Bandwidth 1.4MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 131979, 132322, 132665 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1710.70         | 14.20                             | 30.00       | -15.80      | 2.88 H             | 44                   | 80.70            | -66.50                   |
| 2                                                    | 1745.00         | 14.30                             | 30.00       | -15.70      | 2.81 H             | 60                   | 80.70            | -66.40                   |
| 3                                                    | 1779.30         | 14.00                             | 30.00       | -16.00      | 2.85 H             | 59                   | 80.30            | -66.30                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1710.70         | 16.00                             | 30.00       | -14.00      | 2.29 V             | 120                  | 82.50            | -66.50                   |
| 2                                                    | 1745.00         | 16.40                             | 30.00       | -13.60      | 2.01 V             | 126                  | 82.80            | -66.40                   |
| 3                                                    | 1779.30         | 16.30                             | 30.00       | -13.70      | 1.90 V             | 119                  | 82.60            | -66.30                   |

LTE Band 66, Channel Bandwidth 3MHz

ETLE Band 66, Channel Bandwidth 5MHz

|                                                      |                 |                                   |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------------------------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| Mode                                                 |                 | TX channel 131987, 132322, 132657 |             |             |                    |                      |                  |                          |
| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 13.10                             | 30.00       | -16.90      | 2.99 H             | 40                   | 79.60            | -66.50                   |
| 2                                                    | 1745.00         | 13.50                             | 30.00       | -16.50      | 3.01 H             | 49                   | 79.90            | -66.40                   |
| 3                                                    | 1778.50         | 13.40                             | 30.00       | -16.60      | 2.98 H             | 55                   | 79.70            | -66.30                   |
| Antenna Polarity & Test Distance: Vertical at 3 m    |                 |                                   |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm)                        | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 1711.50         | 16.00                             | 30.00       | -14.00      | 1.92 V             | 90                   | 82.50            | -66.50                   |
| 2                                                    | 1745.00         | 16.40                             | 30.00       | -13.60      | 1.90 V             | 101                  | 82.80            | -66.40                   |
| 3                                                    | 1778.50         | 16.20                             | 30.00       | -13.80      | 1.86 V             | 110                  | 82.50            | -66.30                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$





## 4.2 Modulation Characteristics Measurement

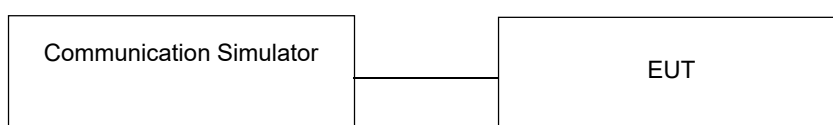
### 4.2.1 Limits of Modulation Characteristics

N/A

### 4.2.2 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

### 4.2.3 Test Setup





## 4.2.4 Test Results



### 4.3 Frequency Stability Measurement

#### 4.3.1 Limits of Frequency Stability Measurement

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

#### 4.3.2 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.

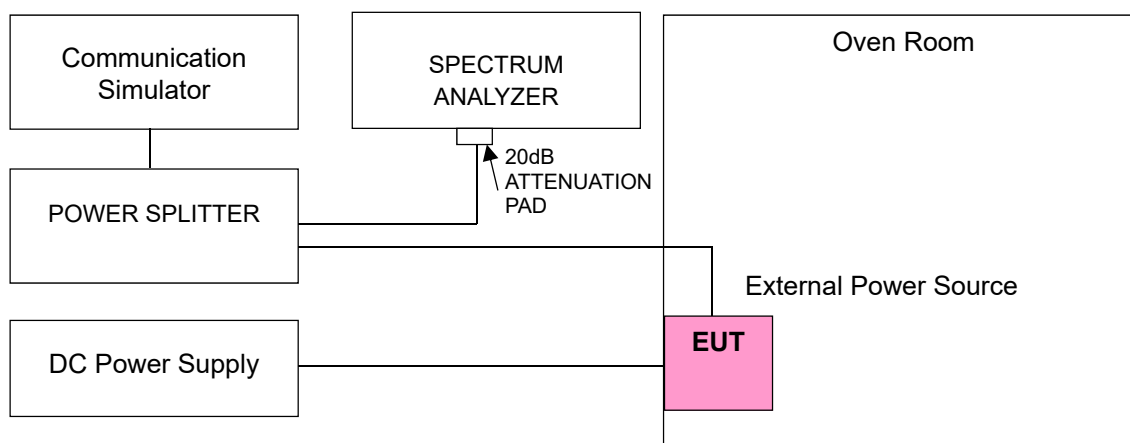
Note: The frequency error was recorded frequency error from the communication simulator.

#### 4.3.3 Test Instruments

| Description & Manufacturer                  | Model No. | Serial No. | Cal. Date     | Cal. Due      |
|---------------------------------------------|-----------|------------|---------------|---------------|
| 5G Wireless Test Platforms<br>Keysight      | E7515B    | MY60102114 | May 28, 2020  | May 27, 2021  |
| Temperature & Humidity<br>Chamber<br>TERCHY | HRM-120RF | 931022     | Dec. 24, 2020 | Dec. 23, 2021 |
| Digital Multimeter<br>Fluke                 | 87-III    | 70360742   | Jun. 23, 2020 | Jun. 22, 2021 |
| DC Power Supply<br>Topward                  | 6306A     | 727263     | NA            | NA            |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

#### 4.3.4 Conducted Setup



#### 4.3.5 Test Results

##### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | n2                      |                       |                 |                       |
|------------------|-------------------------|-----------------------|-----------------|-----------------------|
|                  | Channel Bandwidth 5 MHz |                       |                 |                       |
|                  | Low Channel             |                       | High Channel    |                       |
|                  | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 3.85             | 1852.500002             | 0.001                 | 1907.500001     | 0.001                 |
| 3.40             | 1852.500001             | 0.001                 | 1907.500001     | 0.001                 |
| 4.40             | 1852.500002             | 0.001                 | 1907.500002     | 0.001                 |

Note: The applicant defined the normal working voltage is from 3.40Vdc to 4.40Vdc.

##### Frequency Error vs. Temperature

| Temp. (°C) | n2                      |                       |                 |                       |
|------------|-------------------------|-----------------------|-----------------|-----------------------|
|            | Channel Bandwidth 5 MHz |                       |                 |                       |
|            | Low Channel             |                       | High Channel    |                       |
|            | Frequency (MHz)         | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 1852.500004             | 0.002                 | 1907.500001     | 0.001                 |
| -20        | 1852.500004             | 0.002                 | 1907.500003     | 0.002                 |
| -10        | 1852.500004             | 0.002                 | 1907.500002     | 0.001                 |
| 0          | 1852.500004             | 0.002                 | 1907.500002     | 0.001                 |
| 10         | 1852.500002             | 0.001                 | 1907.500002     | 0.001                 |
| 20         | 1852.499998             | -0.001                | 1907.499996     | -0.002                |
| 30         | 1852.499998             | -0.001                | 1907.499998     | -0.001                |
| 40         | 1852.499998             | -0.001                | 1907.499996     | -0.002                |
| 50         | 1852.499999             | -0.001                | 1907.499997     | -0.002                |

### Frequency Error vs. Voltage

| Voltage (Vdc) | n2                       |                       |                 |                       |
|---------------|--------------------------|-----------------------|-----------------|-----------------------|
|               | Channel Bandwidth 10 MHz |                       |                 |                       |
|               | Low Channel              |                       | High Channel    |                       |
|               | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 3.85          | 1855.000001              | 0.001                 | 1905.000002     | 0.001                 |
| 3.40          | 1855.000001              | 0.001                 | 1905.000002     | 0.001                 |
| 4.40          | 1855.000003              | 0.001                 | 1905.000003     | 0.002                 |

Note: The applicant defined the normal working voltage is from 3.40Vdc to 4.40Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | n2                       |                       |                 |                       |
|------------|--------------------------|-----------------------|-----------------|-----------------------|
|            | Channel Bandwidth 10 MHz |                       |                 |                       |
|            | Low Channel              |                       | High Channel    |                       |
|            | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 1855.000002              | 0.001                 | 1905.000003     | 0.002                 |
| -20        | 1855.000003              | 0.002                 | 1905.000002     | 0.001                 |
| -10        | 1855.000003              | 0.001                 | 1905.000003     | 0.002                 |
| 0          | 1855.000003              | 0.002                 | 1905.000002     | 0.001                 |
| 10         | 1855.000002              | 0.001                 | 1905.000003     | 0.002                 |
| 20         | 1854.999998              | -0.001                | 1904.999999     | -0.001                |
| 30         | 1854.999998              | -0.001                | 1904.999998     | -0.001                |
| 40         | 1854.999997              | -0.002                | 1904.999999     | -0.001                |
| 50         | 1854.999998              | -0.001                | 1904.999997     | -0.001                |

### Frequency Error vs. Voltage

| Voltage (Vdc) | n2                       |                       |                 |                       |
|---------------|--------------------------|-----------------------|-----------------|-----------------------|
|               | Channel Bandwidth 15 MHz |                       |                 |                       |
|               | Low Channel              |                       | High Channel    |                       |
|               | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 3.85          | 1857.500004              | 0.002                 | 1902.500004     | 0.002                 |
| 3.40          | 1857.500003              | 0.002                 | 1902.500003     | 0.002                 |
| 4.40          | 1857.500004              | 0.002                 | 1902.500004     | 0.002                 |

Note: The applicant defined the normal working voltage is from 3.40Vdc to 4.40Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | n2                       |                       |                 |                       |
|------------|--------------------------|-----------------------|-----------------|-----------------------|
|            | Channel Bandwidth 15 MHz |                       |                 |                       |
|            | Low Channel              |                       | High Channel    |                       |
|            | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 1857.500002              | 0.001                 | 1902.500002     | 0.001                 |
| -20        | 1857.500003              | 0.002                 | 1902.500003     | 0.001                 |
| -10        | 1857.500004              | 0.002                 | 1902.500001     | 0.001                 |
| 0          | 1857.500001              | 0.001                 | 1902.500002     | 0.001                 |
| 10         | 1857.500001              | 0.001                 | 1902.500002     | 0.001                 |
| 20         | 1857.499999              | -0.001                | 1902.499996     | -0.002                |
| 30         | 1857.499997              | -0.002                | 1902.499999     | -0.001                |
| 40         | 1857.499998              | -0.001                | 1902.499997     | -0.002                |
| 50         | 1857.499998              | -0.001                | 1902.499998     | -0.001                |

### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | n2                       |                       |                 |                       |
|------------------|--------------------------|-----------------------|-----------------|-----------------------|
|                  | Channel Bandwidth 20 MHz |                       |                 |                       |
|                  | Low Channel              |                       | High Channel    |                       |
|                  | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 3.85             | 1860.000003              | 0.002                 | 1900.000003     | 0.002                 |
| 3.40             | 1860.000003              | 0.002                 | 1900.000002     | 0.001                 |
| 4.40             | 1860.000002              | 0.001                 | 1900.000001     | 0.001                 |

Note: The applicant defined the normal working voltage is from 3.40Vdc to 4.40Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | n2                       |                       |                 |                       |
|------------|--------------------------|-----------------------|-----------------|-----------------------|
|            | Channel Bandwidth 20 MHz |                       |                 |                       |
|            | Low Channel              |                       | High Channel    |                       |
|            | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 1860.000001              | 0.001                 | 1900.000004     | 0.002                 |
| -20        | 1860.000003              | 0.002                 | 1900.000003     | 0.002                 |
| -10        | 1860.000003              | 0.002                 | 1900.000002     | 0.001                 |
| 0          | 1860.000003              | 0.002                 | 1900.000001     | 0.001                 |
| 10         | 1860.000003              | 0.002                 | 1900.000004     | 0.002                 |
| 20         | 1859.999997              | -0.001                | 1899.999998     | -0.001                |
| 30         | 1859.999998              | -0.001                | 1899.999998     | -0.001                |
| 40         | 1859.999998              | -0.001                | 1899.999996     | -0.002                |
| 50         | 1859.999998              | -0.001                | 1899.999998     | -0.001                |

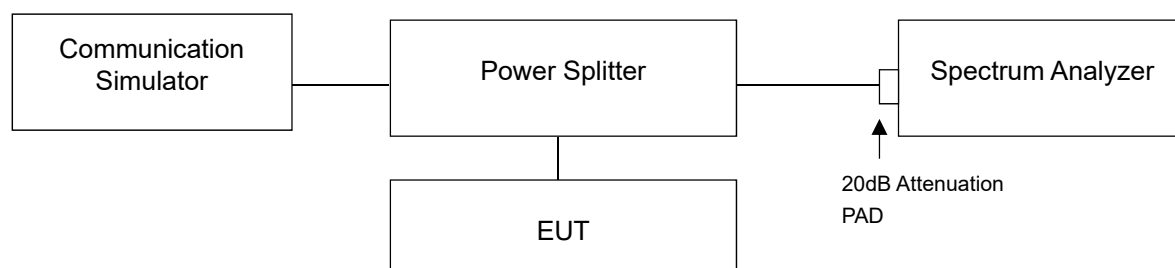
## 4.4 Occupied Bandwidth Measurement

### 4.4.1 Test Procedure

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Measurement method, please refer to section 5.4.4 of ANSI C63.26. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

For the 26dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

### 4.4.2 Test Setup



#### 4.4.3 Test Result

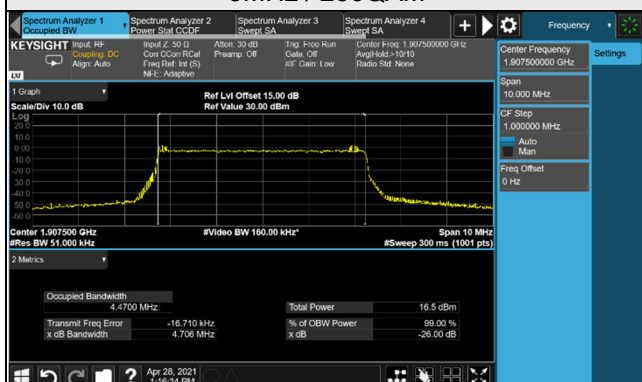
##### Occupied Bandwidth

| n2, Channel Bandwidth: 5MHz  |                 |                              |       |       |       |        |
|------------------------------|-----------------|------------------------------|-------|-------|-------|--------|
| Channel                      | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |       |       |        |
|                              |                 | $\pi/2$ BPSK                 | QPSK  | 16QAM | 64QAM | 256QAM |
| 370500                       | 1852.5          | 4.46                         | 4.46  | 4.46  | 4.47  | 4.46   |
| 376000                       | 1880.0          | 4.46                         | 4.46  | 4.46  | 4.47  | 4.46   |
| 381500                       | 1907.5          | 4.46                         | 4.47  | 4.47  | 4.47  | 4.47   |
| n2, Channel Bandwidth: 10MHz |                 |                              |       |       |       |        |
| Channel                      | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |       |       |        |
|                              |                 | $\pi/2$ BPSK                 | QPSK  | 16QAM | 64QAM | 256QAM |
| 371000                       | 1855.0          | 8.91                         | 9.30  | 9.30  | 9.30  | 9.30   |
| 376000                       | 1880.0          | 8.93                         | 9.28  | 9.29  | 9.28  | 9.28   |
| 381000                       | 1905.0          | 8.91                         | 9.27  | 9.29  | 9.30  | 9.27   |
| n2, Channel Bandwidth: 15MHz |                 |                              |       |       |       |        |
| Channel                      | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |       |       |        |
|                              |                 | $\pi/2$ BPSK                 | QPSK  | 16QAM | 64QAM | 256QAM |
| 371500                       | 1857.5          | 13.44                        | 14.09 | 14.13 | 14.15 | 14.19  |
| 376000                       | 1880.0          | 13.41                        | 14.18 | 14.16 | 14.16 | 14.15  |
| 380500                       | 1902.5          | 13.38                        | 14.08 | 14.13 | 14.10 | 14.11  |
| n2, Channel Bandwidth: 20MHz |                 |                              |       |       |       |        |
| Channel                      | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |       |       |        |
|                              |                 | $\pi/2$ BPSK                 | QPSK  | 16QAM | 64QAM | 256QAM |
| 372000                       | 1860.0          | 17.90                        | 18.94 | 18.90 | 18.96 | 18.97  |
| 376000                       | 1880.0          | 17.89                        | 19.05 | 19.01 | 18.97 | 19.06  |
| 380000                       | 1900.0          | 17.78                        | 18.98 | 18.86 | 19.01 | 18.83  |

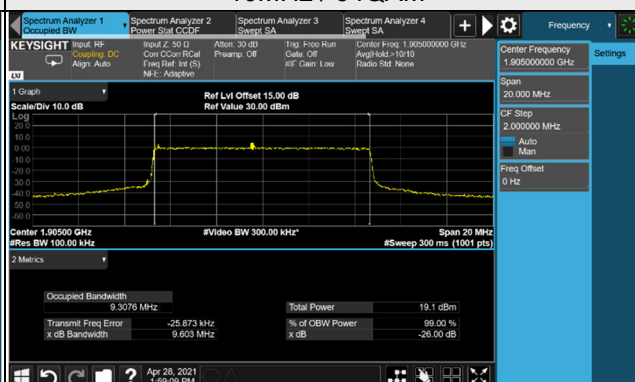


## Spectrum Plot of Worst Value

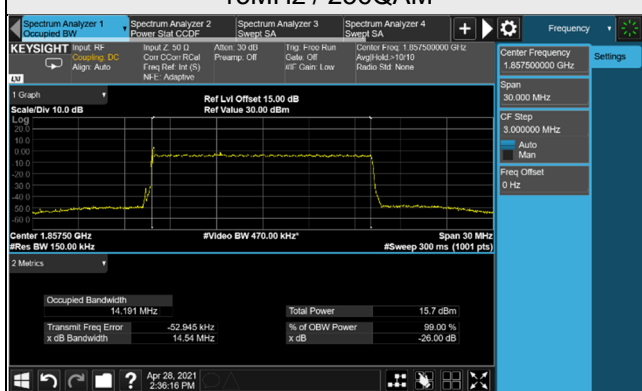
### 5MHz / 256QAM



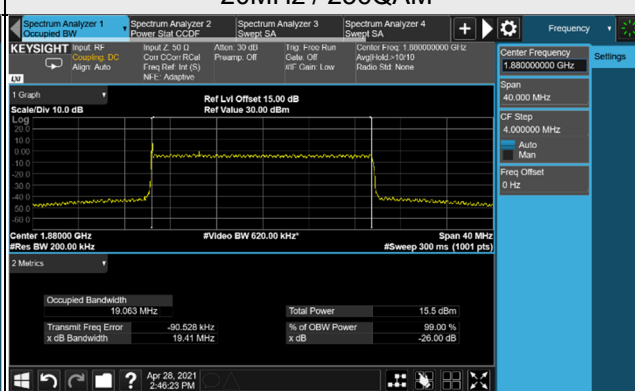
### 10MHz / 64QAM



### 15MHz / 256QAM



### 20MHz / 256QAM

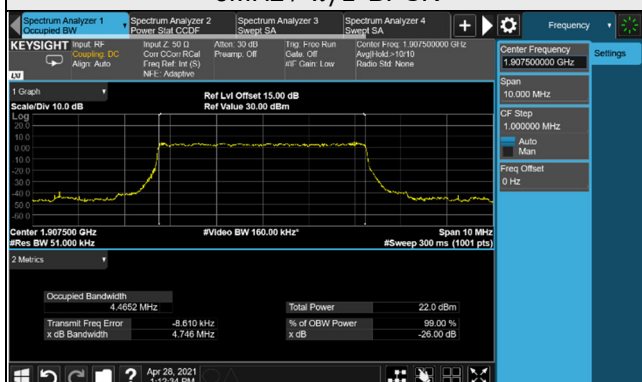


## 26dB Bandwidth

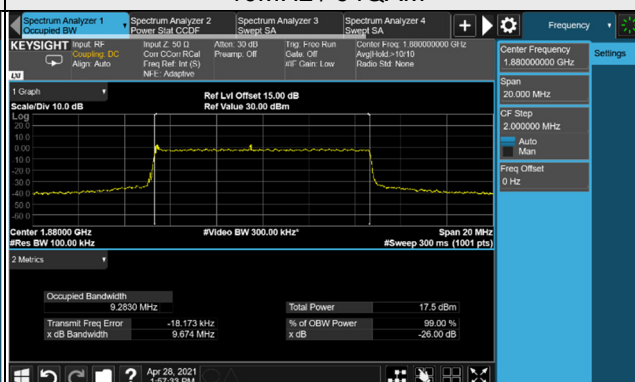
| n2, Channel Bandwidth: 5MHz  |                 |                       |       |       |       |        |
|------------------------------|-----------------|-----------------------|-------|-------|-------|--------|
| Channel                      | Frequency (MHz) | 26dBc Bandwidth (MHz) |       |       |       |        |
|                              |                 | $\pi/2$ BPSK          | QPSK  | 16QAM | 64QAM | 256QAM |
| 370500                       | 1852.5          | 4.73                  | 4.71  | 4.70  | 4.70  | 4.70   |
| 376000                       | 1880.0          | 4.72                  | 4.72  | 4.73  | 4.68  | 4.70   |
| 381500                       | 1907.5          | 4.75                  | 4.71  | 4.72  | 4.74  | 4.70   |
| n2, Channel Bandwidth: 10MHz |                 |                       |       |       |       |        |
| Channel                      | Frequency (MHz) | 26dBc Bandwidth (MHz) |       |       |       |        |
|                              |                 | $\pi/2$ BPSK          | QPSK  | 16QAM | 64QAM | 256QAM |
| 371000                       | 1855.0          | 9.26                  | 9.66  | 9.58  | 9.58  | 9.56   |
| 376000                       | 1880.0          | 9.24                  | 9.61  | 9.58  | 9.67  | 9.57   |
| 381000                       | 1905.0          | 9.24                  | 9.58  | 9.59  | 9.60  | 9.60   |
| n2, Channel Bandwidth: 15MHz |                 |                       |       |       |       |        |
| Channel                      | Frequency (MHz) | 26dBc Bandwidth (MHz) |       |       |       |        |
|                              |                 | $\pi/2$ BPSK          | QPSK  | 16QAM | 64QAM | 256QAM |
| 371500                       | 1857.5          | 13.89                 | 14.59 | 14.55 | 14.51 | 14.54  |
| 376000                       | 1880.0          | 13.87                 | 14.53 | 14.55 | 14.54 | 14.56  |
| 380500                       | 1902.5          | 13.84                 | 14.59 | 14.55 | 14.60 | 14.57  |
| n2, Channel Bandwidth: 20MHz |                 |                       |       |       |       |        |
| Channel                      | Frequency (MHz) | 26dBc Bandwidth (MHz) |       |       |       |        |
|                              |                 | $\pi/2$ BPSK          | QPSK  | 16QAM | 64QAM | 256QAM |
| 372000                       | 1860.0          | 18.46                 | 19.53 | 19.55 | 19.48 | 19.48  |
| 376000                       | 1880.0          | 18.53                 | 19.54 | 19.48 | 19.61 | 19.41  |
| 380000                       | 1900.0          | 18.41                 | 19.56 | 19.46 | 19.49 | 19.39  |

## Spectrum Plot of Worst Value

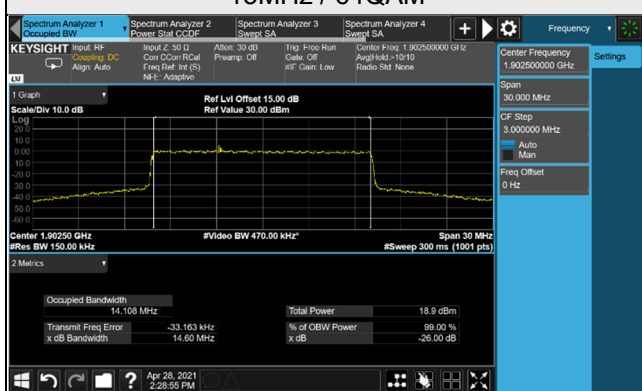
5MHz /  $\pi/2$  BPSK



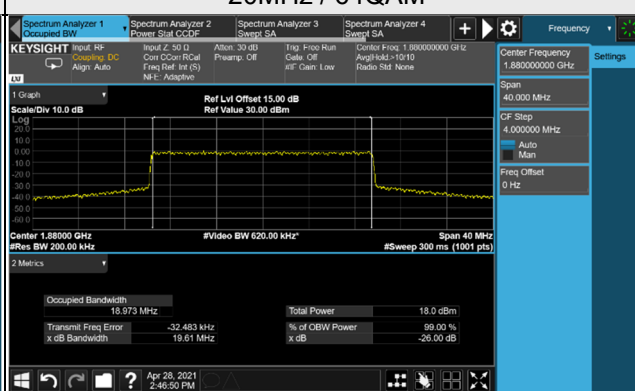
10MHz / 64QAM



15MHz / 64QAM



20MHz / 64QAM

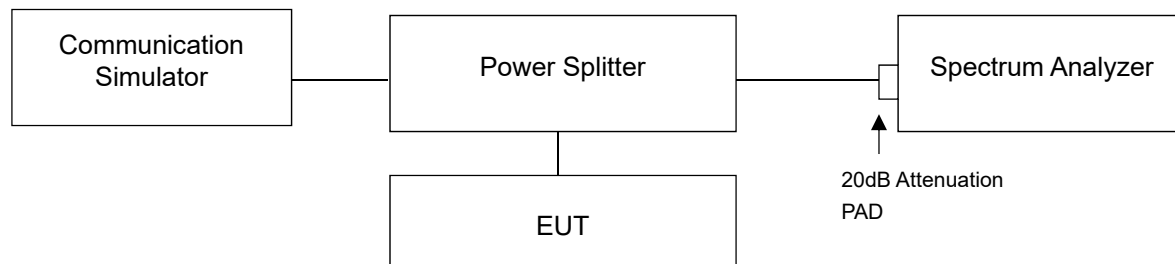


## 4.5 Band Edge Measurement

### 4.5.1 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.

### 4.5.2 Test Setup



### 4.5.3 Test Procedures

- All measurements were done at low and high operational frequency range.
- The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 51kHz and VB of the spectrum is 160kHz (Channel Bandwidth 5MHz).
- The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (Channel Bandwidth 10MHz).
- The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 150kHz and VB of the spectrum is 470kHz (Channel Bandwidth 15MHz).
- The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 200kHz and VB of the spectrum is 620kHz (Channel Bandwidth 20MHz).
- Record the max trace plot into the test report.

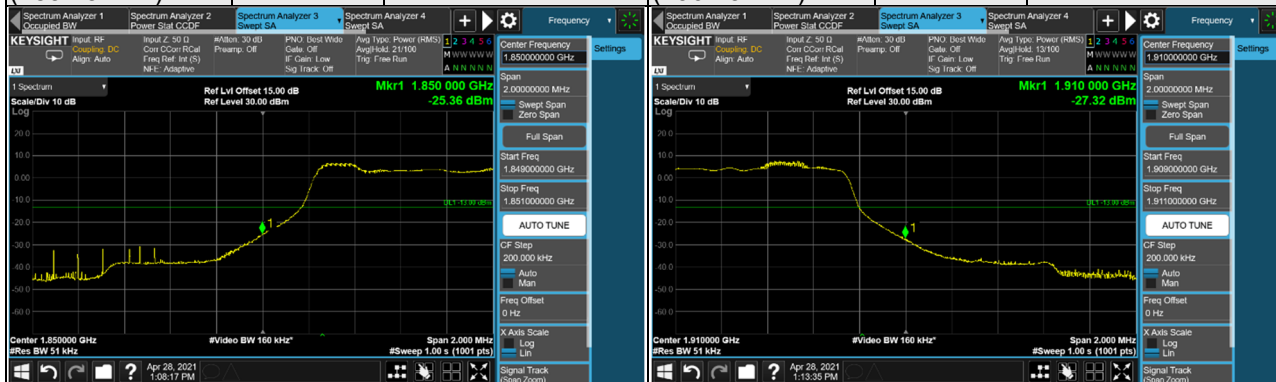
## 4.5.4 Test Results

n2, Channel Bandwidth 5MHz

| Channel 370500<br>(1852.5MHz) | $\pi/2$ BPSK | 1 RB / 0 RB Offset | Channel 381500<br>(1907.5MHz) | $\pi/2$ BPSK | 1 RB / 24 RB Offset |
|-------------------------------|--------------|--------------------|-------------------------------|--------------|---------------------|
|-------------------------------|--------------|--------------------|-------------------------------|--------------|---------------------|



| Channel 370500<br>(1852.5MHz) | $\pi/2$ BPSK | 25 RB / 0 RB Offset | Channel 381500<br>(1907.5MHz) | $\pi/2$ BPSK | 25 RB / 0 RB Offset |
|-------------------------------|--------------|---------------------|-------------------------------|--------------|---------------------|
|-------------------------------|--------------|---------------------|-------------------------------|--------------|---------------------|



n2, Channel Bandwidth 10MHz

Channel 371000  
(1855.0MHz)

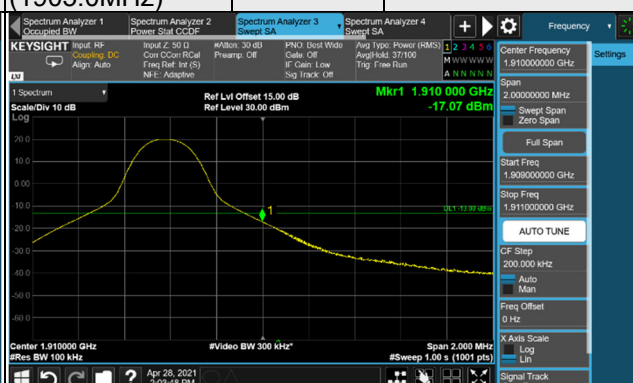
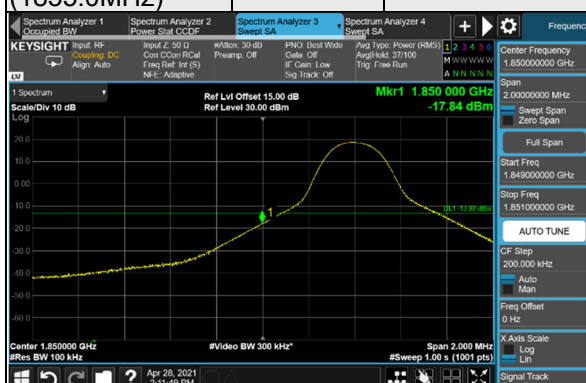
QPSK

1 RB / 0 RB Offset

Channel 381000  
(1905.0MHz)

QPSK

1 RB / 51 RB Offset



Channel 371000  
(1855.0MHz)

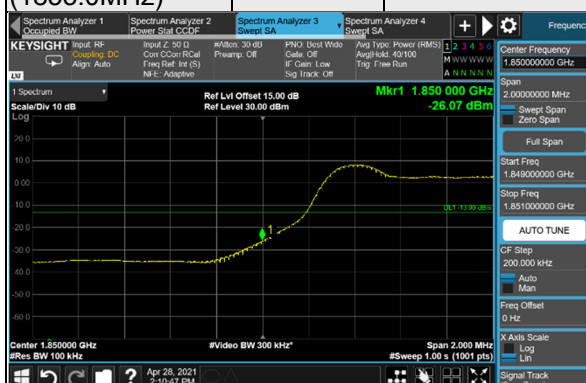
QPSK

52 RB / 0 RB Offset

Channel 381000  
(1905.0MHz)

QPSK

52 RB / 0 RB Offset



n2, Channel Bandwidth 15MHz

Channel 371500  
(1857.5MHz)

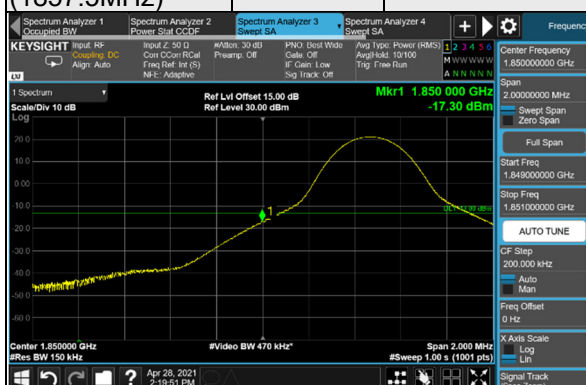
QPSK

1 RB / 0 RB Offset

Channel 380500  
(1902.5MHz)

QPSK

1 RB / 78 RB Offset



Channel 371500  
(1857.5MHz)

QPSK

79 RB / 0 RB Offset

Channel 380500  
(1902.5MHz)

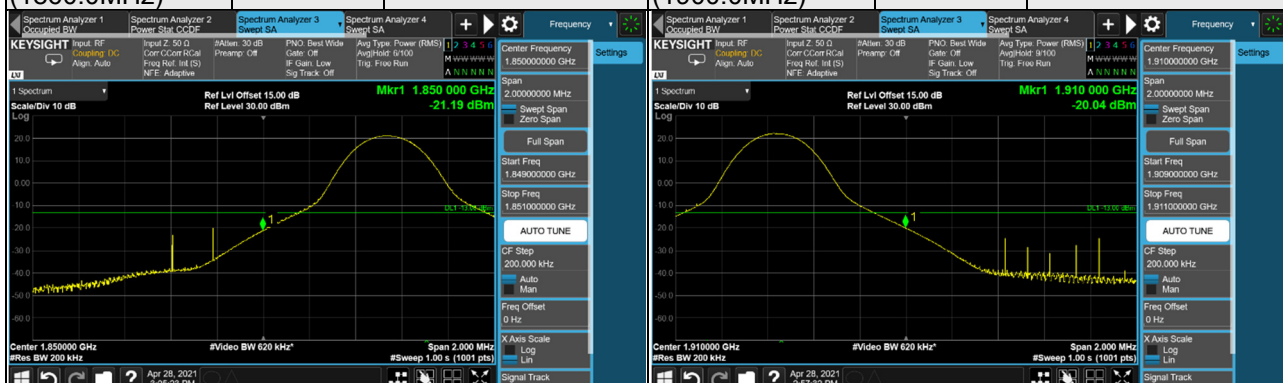
QPSK

79 RB / 0 RB Offset



n2, Channel Bandwidth 20MHz

|                               |      |                    |                               |      |                      |
|-------------------------------|------|--------------------|-------------------------------|------|----------------------|
| Channel 372000<br>(1860.0MHz) | QPSK | 1 RB / 0 RB Offset | Channel 380000<br>(1900.0MHz) | QPSK | 1 RB / 105 RB Offset |
|-------------------------------|------|--------------------|-------------------------------|------|----------------------|



|                               |      |                      |                               |      |                      |
|-------------------------------|------|----------------------|-------------------------------|------|----------------------|
| Channel 372000<br>(1860.0MHz) | QPSK | 106 RB / 0 RB Offset | Channel 380000<br>(1900.0MHz) | QPSK | 106 RB / 0 RB Offset |
|-------------------------------|------|----------------------|-------------------------------|------|----------------------|



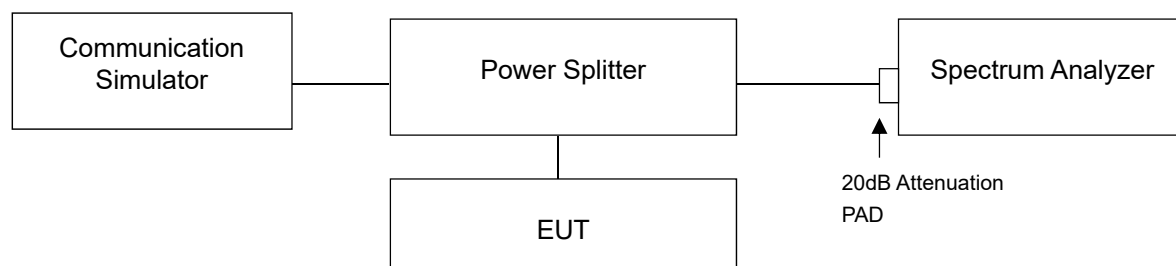


## 4.6 Peak to Average Ratio

### 4.6.1 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

### 4.6.2 Test Setup



### 4.6.3 Test Procedures

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

#### 4.6.4 Test Results

| n2, Channel Bandwidth: 5MHz  |                 |                            |      |       |       |        |
|------------------------------|-----------------|----------------------------|------|-------|-------|--------|
| Channel                      | Frequency (MHz) | Peak To Average Ratio (dB) |      |       |       |        |
|                              |                 | $\pi/2$ BPSK               | QPSK | 16QAM | 64QAM | 256QAM |
| 370500                       | 1852.5          | 4.32                       | 7.31 | 7.27  | 7.58  | 9.13   |
| 376000                       | 1880.0          | 4.34                       | 6.12 | 6.03  | 6.34  | 8.67   |
| 381500                       | 1907.5          | 4.38                       | 6.86 | 6.97  | 7.17  | 8.70   |
| n2, Channel Bandwidth: 10MHz |                 |                            |      |       |       |        |
| Channel                      | Frequency (MHz) | Peak To Average Ratio (dB) |      |       |       |        |
|                              |                 | $\pi/2$ BPSK               | QPSK | 16QAM | 64QAM | 256QAM |
| 371000                       | 1855.0          | 4.70                       | 7.38 | 7.25  | 7.65  | 8.94   |
| 376000                       | 1880.0          | 4.62                       | 6.58 | 6.67  | 7.03  | 8.89   |
| 381000                       | 1905.0          | 4.68                       | 7.13 | 7.13  | 7.58  | 8.94   |
| n2, Channel Bandwidth: 15MHz |                 |                            |      |       |       |        |
| Channel                      | Frequency (MHz) | Peak To Average Ratio (dB) |      |       |       |        |
|                              |                 | $\pi/2$ BPSK               | QPSK | 16QAM | 64QAM | 256QAM |
| 371500                       | 1857.5          | 4.88                       | 7.46 | 7.23  | 7.79  | 9.14   |
| 376000                       | 1880.0          | 5.03                       | 7.03 | 7.03  | 7.43  | 9.12   |
| 380500                       | 1902.5          | 4.81                       | 7.19 | 7.45  | 7.79  | 9.12   |
| n2, Channel Bandwidth: 20MHz |                 |                            |      |       |       |        |
| Channel                      | Frequency (MHz) | Peak To Average Ratio (dB) |      |       |       |        |
|                              |                 | $\pi/2$ BPSK               | QPSK | 16QAM | 64QAM | 256QAM |
| 372000                       | 1860.0          | 4.68                       | 7.52 | 7.31  | 7.60  | 8.97   |
| 376000                       | 1880.0          | 4.78                       | 7.30 | 7.27  | 7.64  | 8.90   |
| 380000                       | 1900.0          | 4.75                       | 7.56 | 7.41  | 7.68  | 9.08   |