# FCC RADIO TEST REPORT

| | | |
|---|---|---|
| FCC ID | : | ZMOFM350GLG |
| Equipment | : | 5G Module |
| Brand Name | : | Fibocom Wireless Inc. |
| Model Name | : | FM350-GL |
| Applicant | : | Fibocom Wireless Inc.<br>1101,Tower A, Building 6, Shenzhen International, Innovation Valley, Dashi 1st Rd, Nanshan, ShenZhen, China |
| Manufacturer | : | LCFC (HeFei) Electronics Technology Co., Ltd.<br>No. 3188-1, Yungu Road (Hefei Export Processing Zone), Hefei Economics & Technology Development Area, Anhui, CHINA |
| Standard | : | FCC 47 CFR Part 2, 27 |

**Equipment: Fibocom FM350-GL tested inside of Lenovo Notebook Computer.**

**The product was received on Oct. 20, 2022 and testing was performed from Nov. 05, 2022 to Nov. 17, 2022. We, Sporton International Inc. Wensan Laboratory Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.**

**The test results in this partial report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.**

Louis Wu

**Approved by: Louis Wu**

***Sporton International Inc. Wensan Laboratory***

# Table of Contents

# History of this test report

| Report No. | Version | Description | Issue Date |
|---|---|---|---|
| FG2O2026J | 01 | Initial issue of report | Dec. 27, 2022 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---|---|---|---|---|
| 3.2 | §2.1046 | Conducted Output Power | Reporting only | - |
| | §27.50 (j)(3) | Equivalent Isotropic Radiated Power (n77) (n78) | Pass | |
| - | §27.50 (j)(4) | Peak-to-Average Ratio | - | See Note |
| - | §2.1049 | Occupied Bandwidth | - | See Note |
| - | §2.1051 §27.53 (l)(2) | Conducted Band Edge Measurement (n77) (n78) | - | See Note |
| - | §2.1051 §27.53 (l)(2) | Conducted Spurious Emission (n77) (n78) | - | See Note |
| - | §2.1055 §27.54 | Frequency Stability Temperature & Voltage | - | See Note |
| 4.2 | §2.1051 §27.53 (l)(2) | Radiated Spurious Emission (n77) (n78) | Pass | 14.41 dB under limit at 15165.000 MHz |
| **Note:** The certified module (model: FM350-GL ) which supports normal mode and TX switching mode being integrated into a notebook computer. Spot check on both modes were performed and no degradation occur. Thus the module test results were leveraged in this report and additionally reporting the spot check results in this report. | | | | |

| **Declaration of Conformity:** |
|---|
| 1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.<br>It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.<br>2. The measurement uncertainty please refer to report "Uncertainty of Evaluation". |
| **Comments and Explanations:** |
| The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity. |

**Reviewed by: Sheng Kuo**

**Report Producer: Cindy Liu**

# 1 General Description

## 1.1 Product Feature of Equipment Under Test

| Product Feature | |
|---|---|
| **Equipment** | 5G Module |
| **Brand Name** | Fibocom Wireless Inc. |
| **Model Name** | FM350-GL |
| **FCC ID** | ZMOFM350GLG |
| **Sample 1** | EUT with Host 1 |
| **Sample 2** | EUT with Host 2 |
| **EUT supports Radios application** | WCDMA/HSPA/LTE/GNSS |
| **EUT Stage** | Production Unit |

**Remark:**

1. The above EUT's information was declared by manufacturer.
2. Equipment: Fibocom FM350-GL tested inside of Lenovo Notebook Computer.

| | **Normal mode** | **TX switching mode** |
|---|---|---|
| | TX/RX | TX/RX |
| **Ant_0 (Main)** | WCDMA : 2/4/5<br>LTE : 2/4/5/7/12/13/14/17/25/26/30/38/66/71<br>NR : 2/5/7/25/30/38/66/71 | WCDMA : 5<br>LTE : 5/12/13/14/17/26/41/48/71<br>NR : 5/41/71/77/78 |
| **Ant_2 (MIMO2)** | LTE : 41/48<br>NR : 41/77/78 | WCDMA : 2/4<br>LTE : 2/4/7/25/30/38/66<br>NR : 2/7/25/30/38/66 |

The product was installed into Notebook Computer (Brand Name: Lenovo, Model Name: TP00129C) during test, and the host information was recorded in the following table.

| Host Information | |
|---|---|
| **Host 1** | Host with Amphenol Antenna |
| **Host 2** | Host with Novocomms/JYT Antenna |

| WWAN Antenna Information | | | | |
|---|---|---|---|---|
| **Main Antenna** | **Manufacturer** | Amphenol | **Peak gain (dBi)** | 5G NR n77 : 1.79<br>5G NR n78 : 2.57 |
| | **Part number** | TKC116-16-000-C | **Type** | PIFA |
| | **Manufacturer** | Novocomms/JYT | **Peak gain (dBi)** | 5G NR n77 : 0.12<br>5G NR n78 : 0.66 |
| | **Part number** | JYAAE0150HR | **Type** | PIFA |
| **MIMO 2 Antenna** | **Manufacturer** | Amphenol | **Peak gain (dBi)** | 5G NR n77 : 0.54<br>5G NR n78 : 0.54 |
| | **Part number** | TKC115-16-000-C | **Type** | PIFA |
| | **Manufacturer** | Novocomms/JYT | **Peak gain (dBi)** | 5G NR n77 : 0.55<br>5G NR n78 : 0.78 |
| | **Part number** | JYAAE0151HR | **Type** | PIFA |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

## 1.2 Product Specification of Equipment Under Test

| Product Specification is subject to this standard | |
|---|---|
| **Tx/Rx Frequency** | 5G NR n77: 3705 MHz ~ 3975 MHz<br>5G NR n78: 3705 MHz ~ 3795 MHz |
| **Bandwidth** | **SCS 15kHz:**<br>10MHz/15MHz/20MHz<br>**SCS 30kHz:**<br>10MHz/15MHz/20MHz/40MHz/50MHz/60MHz/80MHz/100MHz |
| **Maximum Output Power to Antenna** | **Main Antenna:**<br>5G NR n77: 25.43 dBm for HPUE<br>5G NR n78: 26.19 dBm for HPUE<br>**MIMO 2 Antenna:**<br>5G NR n77: 24.32 dBm for HPUE<br>5G NR n78: 25.67 dBm for HPUE |
| **Type of Modulation** | CP-OFDM: QPSK/16QAM/64QAM/256QAM<br>DFT-s-OFDM: PI/2 BPSK/QPSK/16QAM/64QAM/256QAM |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

## 1.3 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.4 Testing Location

| | |
|---|---|
| **Test Site** | Sporton International Inc. EMC & Wireless Communications Laboratory |
| **Test Site Location** | No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333 |
| **Test Site No.** | **Sporton Site No.** |
| | TH03-HY (TAF Code: 1190) |
| **Test Engineer** | Ivy Yeh |
| **Temperature (℃)** | 20~24 |
| **Relative Humidity (%)** | 50~52 |
| **Remark** | The Conducted test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory |

| | |
|---|---|
| **Test Site** | Sporton International Inc. Wensan Laboratory |
| **Test Site Location** | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010 |
| **Test Site No.** | **Sporton Site No.** |
| | 03CH12-HY |
| **Test Engineer** | Jack Cheng, Tim Lee, Wilson Wu and Jesse Fan |
| **Temperature (℃)** | 20~25 |
| **Relative Humidity (%)** | 50~60 |

**Note:** The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW3786

## 1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26-2015
- ANSI / TIA-603-E
- FCC 47 CFR Part 2, 27
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- FCC KDB 414788 D01 Radiated Test Site v01r01.

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. The TAF code is not including all the FCC KDB listed without accreditation.

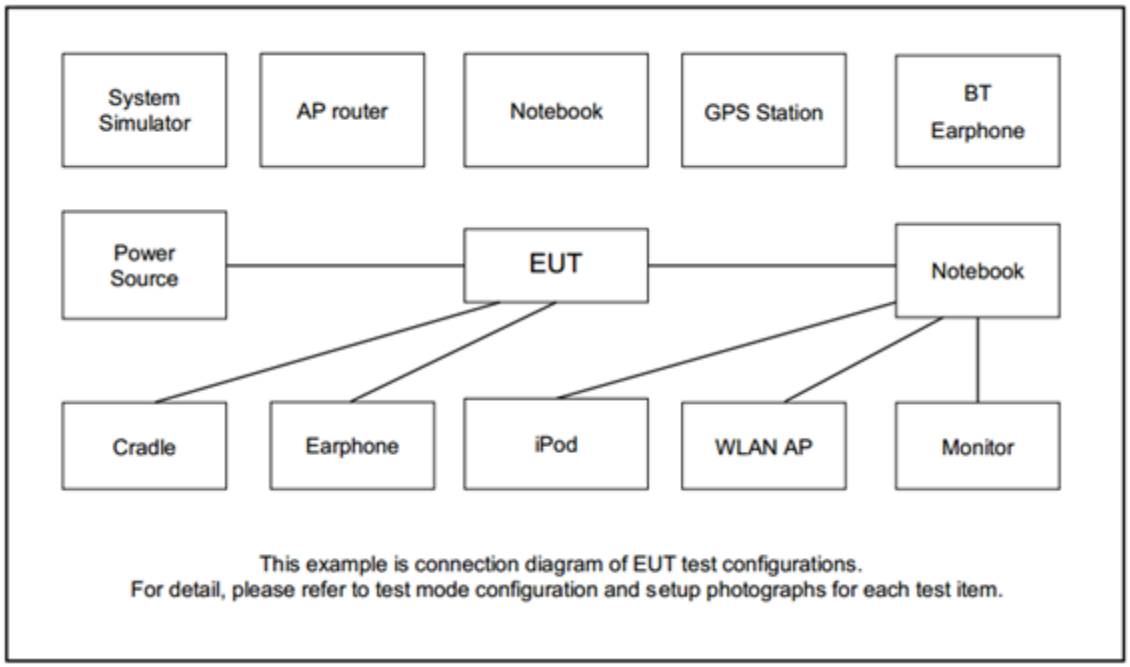
# 2 Test Configuration of Equipment Under Test

## 2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

| Test Items | NR Band | Bandwidth (MHz) | | | | | | | | | | | | Modulation | | | | | RB # | | | Test Channel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | PI/2 BPSK | QPSK | 16QAM | 64QAM | 256QAM | 1 | Half | Full | L | M | H |
| Max. Output Power | n77 | - | v | v | v | - | - | v | v | v | v | - | v | v | v | v | v | v | v | v | v | v | v | v |
| | n78 | - | v | v | v | - | - | v | v | v | v | - | v | v | v | v | v | v | v | v | v | v | v | v |
| E.I.R.P | n77 | - | v | v | v | - | - | v | v | v | v | - | v | v | v | v | v | v | Max. Power | | | | | |
| | n78 | - | v | v | v | - | - | v | v | v | v | - | v | v | v | v | v | v | | | | | | |
| Radiated Spurious Emission | n77 | - | | | | - | - | | | | | - | v | v | | | | | v | | | v | v | v |
| | n78 | - | | | | - | - | | | | | - | v | v | | | | | v | | | | v | |
| Remark | 1. The mark "**v** " means that this configuration is chosen for testing<br>2. The mark "-" means that this bandwidth is not supported.<br>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.<br>4. For radiated measurement, pre-scanned in two modes, DFT-s OFDM and CP OFDM. The worst cases (DFT-s OFDM) were recorded in this report. | | | | | | | | | | | | | | | | | | | | | | | |

## 2.2 Connection Diagram of Test System




This example is connection diagram of EUT test configurations.
For detail, please refer to test mode configuration and setup photographs for each test item.

## 2.3 Support Unit used in test configuration and system

| Item | Equipment | Brand Name | Model No. | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1. | System Simulator | Anritsu | MT8821C | N/A | N/A | Unshielded, 1.8 m |
| 2. | System Simulator | Anritsu | MT8000A | N/A | N/A | Unshielded, 1.8 m |
| 3. | iPod Earphone | Apple | N/A | Verification | Unshielded, 1.0 m | N/A |

## 2.4 Frequency List of Low/Middle/High Channels

| 5G NR Band n77 Channel and Frequency List for SCS 15kHz | | | | |
|---|---|---|---|---|
| BW [MHz] | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 20 | Channel | 647334 | 656000 | 664666 |
| | Frequency | 3710.01 | 3840 | 3969.99 |
| 15 | Channel | 647168 | 656000 | 664832 |
| | Frequency | 3707.52 | 3840 | 3972.48 |
| 10 | Channel | 647000 | 656000 | 665000 |
| | Frequency | 3705 | 3840 | 3975 |

| 5G NR Band n77 Channel and Frequency List for SCS 30kHz | | | | |
|---|---|---|---|---|
| BW [MHz] | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 100 | Channel | 650000 | 656000 | 662000 |
| | Frequency | 3750 | 3840 | 3930 |
| 80 | Channel | 649334 | 656000 | 662666 |
| | Frequency | 3740.01 | 3840 | 3939.99 |
| 60 | Channel | 648668 | 656000 | 663332 |
| | Frequency | 3730.02 | 3840 | 3949.98 |
| 50 | Channel | 648334 | 656000 | 663666 |
| | Frequency | 3725.01 | 3840 | 3954.99 |
| 40 | Channel | 648000 | 656000 | 664000 |
| | Frequency | 3720 | 3840 | 3960 |
| 20 | Channel | 647334 | 656000 | 664666 |
| | Frequency | 3710.01 | 3840 | 3969.99 |
| 15 | Channel | 647168 | 656000 | 664832 |
| | Frequency | 3707.52 | 3840 | 3972.48 |
| 10 | Channel | 647000 | 656000 | 665000 |
| | Frequency | 3705 | 3840 | 3975 |

| 5G NR n78 Channel and Frequency List for SCS 15kHz | | | | |
|---|---|---|---|---|
| BW [MHz] | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 20 | Channel | 647334 | 650000 | 652666 |
| | Frequency | 3710.01 | 3750 | 3789.99 |
| 15 | Channel | 647168 | 650000 | 664832 |
| | Frequency | 3707.52 | 3750 | 3972.48 |
| 10 | Channel | 647000 | 650000 | 653000 |
| | Frequency | 3705 | 3750 | 3795 |

| 5G NR n78 Channel and Frequency List for SCS 30kHz | | | | |
|---|---|---|---|---|
| BW [MHz] | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 100 | Channel | - | 650000 | - |
| | Frequency | - | 3750 | - |
| 80 | Channel | 649334 | 650000 | 650666 |
| | Frequency | 3740.01 | 3750 | 3759.99 |
| 60 | Channel | 648668 | 650000 | 651332 |
| | Frequency | 3730.02 | 3750 | 3769.98 |
| 50 | Channel | 648334 | 650000 | 651666 |
| | Frequency | 3725.01 | 3750 | 3774.99 |
| 40 | Channel | 648000 | 650000 | 652000 |
| | Frequency | 3720 | 3750 | 3780 |
| 20 | Channel | 647334 | 650000 | 652666 |
| | Frequency | 3710.01 | 3750 | 3789.99 |
| 15 | Channel | 647168 | 650000 | 664832 |
| | Frequency | 3707.52 | 3750 | 3972.48 |
| 10 | Channel | 647000 | 650000 | 653000 |
| | Frequency | 3705 | 3750 | 3795 |

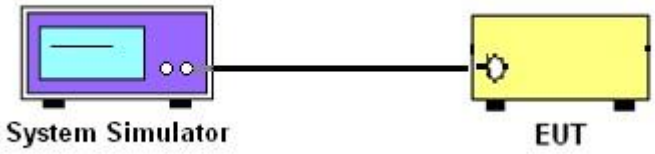
# 3 Conducted Test Items

## 3.1 Measuring Instruments

See list of measuring instruments of this test report.

### 3.1.1 Test Setup

### 3.1.2 Conducted Output Power




### 3.1.3 Test Result of Conducted Test

Please refer to Appendix A.

# 3.2 Conducted Output Power and EIRP

## 3.2.1 Description of the Conducted Output Power Measurement and EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n77 and n78

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

$P_T$ = transmitter output power in dBm

$G_T$ = gain of the transmitting antenna in dBi

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

## 3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

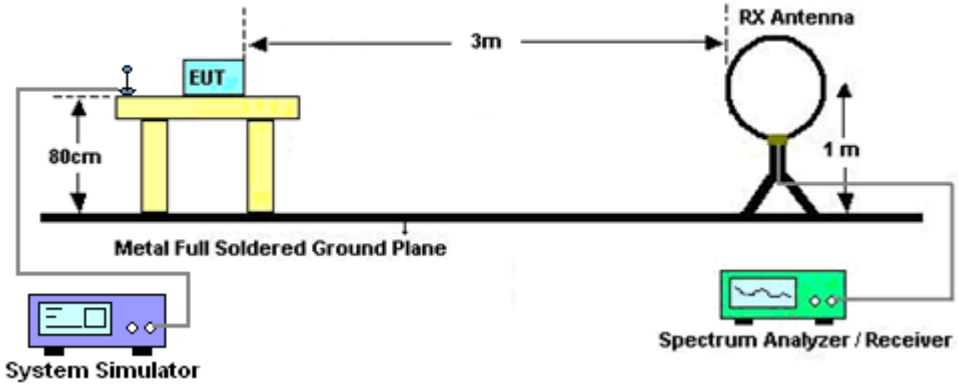
# 4 Radiated Test Items

## 4.1 Measuring Instruments

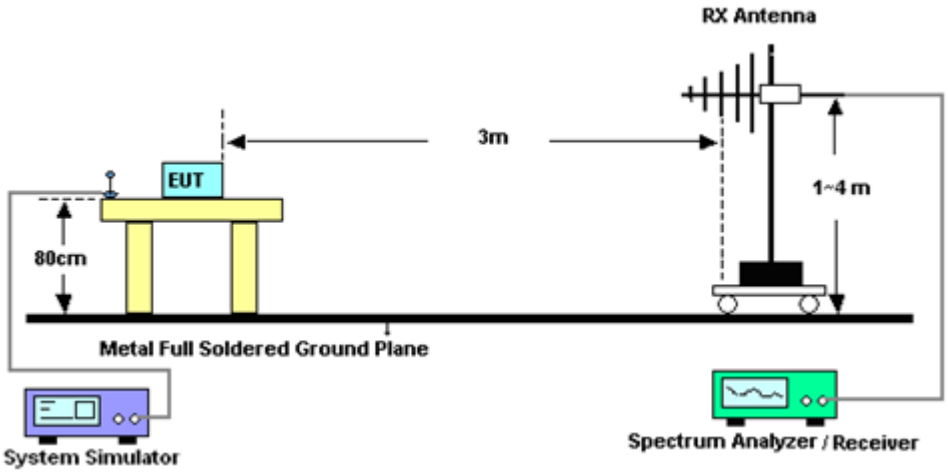
See list of measuring instruments of this test report.

### 4.1.1 Test Setup

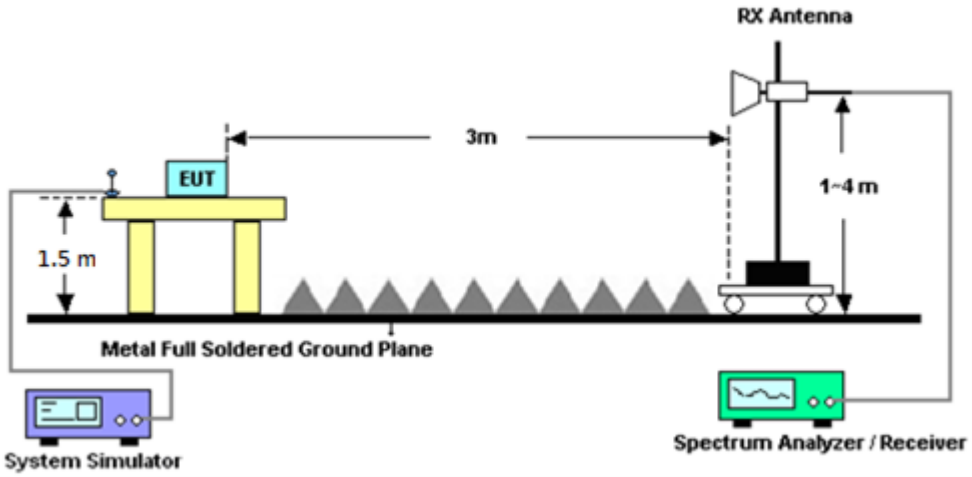
**For radiated emissions below 30MHz**



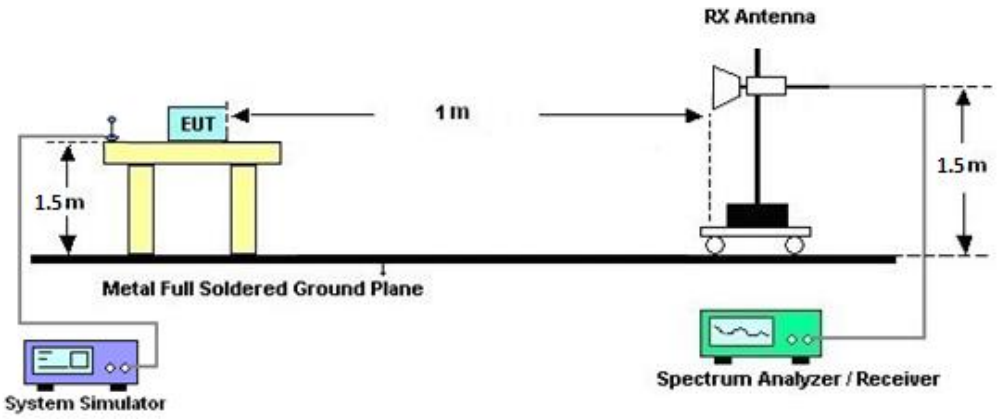

**For radiated test from 30MHz to 1GHz**



**For radiated test from 1GHz to 18GHz**




**For radiated test above 18GHz**




## 4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

**Note:**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

## 4.2 Radiated Spurious Emission Measurement

### 4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

### 4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

# 5 List of Measuring Equipment

| Instrument | Brand Name | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| Loop Antenna | Rohde & Schwarz | HFH2-Z2 | 100488 | 9 kHz~30 MHz | May 13, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | May 12, 2023 | Radiation (03CH12-HY) |
| Horn Antenna | SCHWARZBECK | BBHA 9120 D | 9120D-1328 | 1GHz~18GHz | Dec. 03, 2021 | Nov. 12, 2022~ Nov. 14, 2022 | Dec. 02, 2022 | Radiation (03CH12-HY) |
| Bilog Antenna | TESEQ | CBL 6111D & 00800N1D01N-06 | 40103 & 07 | 30MHz~1GHz | Apr. 24, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Apr. 23, 2023 | Radiation (03CH12-HY) |
| Bilog Antenna | TESEQ | CBL 6111D & N-6-06 | 35414 & AT-N0602 | 30MHz~1GHz | Oct. 08, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Oct. 07, 2023 | Radiation (03CH12-HY) |
| Horn Antenna | SCHWARZBECK | BBHA 9120 D | 9120D-1212 | 1GHz~18GHz | Mar. 10, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Mar. 09, 2023 | Radiation (03CH12-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170251 | 18GHz~40GHz | Nov. 30, 2021 | Nov. 12, 2022~ Nov. 14, 2022 | Nov. 29, 2022 | Radiation (03CH12-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170576 | 18GHz~40GHz | May 14, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | May 13, 2023 | Radiation (03CH12-HY) |
| Preamplifier | COM-POWER | PA-103 | 161075 | 10MHz~1GHz | Mar. 23, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Mar. 22, 2023 | Radiation (03CH12-HY) |
| Preamplifier | Aglient | 8449B | 3008A02375 | 1GHz~26.5GHz | May 24, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | May 23, 2023 | Radiation (03CH12-HY) |
| Preamplifier | E-INSTRUMENT TECH LTD. | ERA-100M-18G-56-01-A70 | EC1900249 | 1GHz-18GHz | Dec. 22, 2021 | Nov. 12, 2022~ Nov. 14, 2022 | Dec. 21, 2022 | Radiation (03CH12-HY) |
| Preamplifier | E-INSTRUMENT TECH LTD. | ERA-100M-18G-56-01-A70 | EC1900269 | 1GHz-18GHz | Dec. 27, 2021 | Nov. 12, 2022~ Nov. 14, 2022 | Dec. 26, 2022 | Radiation (03CH12-HY) |
| Preamplifier | EMEC | EM18G40G | 060715 | 18GHz~40GHz | Dec. 24, 2021 | Nov. 12, 2022~ Nov. 14, 2022 | Dec. 23, 2022 | Radiation (03CH12-HY) |
| Spectrum Analyzer | Keysight | N9010A | MY53470118 | 10Hz~44GHz | Jan. 12, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Jan. 11, 2023 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | MY9837/4PE | 9kHz~30MHz | Mar. 10, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Mar. 09, 2023 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 126E | 0058/126E | 30MHz~18GHz | Dec. 10, 2021 | Nov. 12, 2022~ Nov. 14, 2022 | Dec. 09, 2022 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | 505134/2 | 30MHz~40GHz | Feb. 21, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Feb. 20, 2023 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | 803953/2 | 30MHz~40GHz | Mar. 08, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Mar. 07, 2023 | Radiation (03CH12-HY) |
| Filter | Wainwright | WHKX8-5872.5-6750-18000-40ST | SN2 | 6.75GHz High Pass Filter | Mar. 15, 2022 | Nov. 12, 2022~ Nov. 14, 2022 | Mar. 14, 2023 | Radiation (03CH12-HY) |
| Hygrometer | TECPEL | DTM-303B | TP140325 | N/A | Nov. 26, 2021 | Nov. 12, 2022~ Nov. 14, 2022 | Nov. 25, 2022 | Radiation (03CH12-HY) |
| Controller | EMEC | EM1000 | N/A | Control Turn table & Ant Mast | N/A | Nov. 12, 2022~ Nov. 14, 2022 | N/A | Radiation (03CH12-HY) |
| Antenna Mast | EMEC | AM-BS-4500-B | N/A | 1m~4m | N/A | Nov. 12, 2022~ Nov. 14, 2022 | N/A | Radiation (03CH12-HY) |
| Turn Table | EMEC | TT2000 | N/A | 0~360 Degree | N/A | Nov. 12, 2022~ Nov. 14, 2022 | N/A | Radiation (03CH12-HY) |
| Software | Audix | E3 6.2009-8-24 | RK-000989 | N/A | N/A | Nov. 12, 2022~ Nov. 14, 2022 | N/A | Radiation (03CH12-HY) |

| Instrument | Brand Name | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| Hygrometer | TECPEL | DTM-303B | TP200886 | NA | Mar. 21, 2022 | Nov. 05, 2022 ~ Nov. 17, 2022 | Mar. 20, 2023 | Conducted (TH03-HY) |
| Base Station (Measure) | Anritsu | MT8000A | 6262012917 | FR1 | Feb. 11, 2022 | Nov. 05, 2022 ~ Nov. 17, 2022 | Feb. 10, 2023 | Conducted (TH03-HY) |
| Radio Communication Analyzer | Anritsu | MT8821C | 6201664755 | LTE FDD/TDD LTE-2CC DLCA/ULCA | Aug. 01, 2022 | Nov. 05, 2022 ~ Nov. 17, 2022 | Jul. 31, 2023 | Conducted (TH03-HY) |
| Coupler | Warison | 20dB 25W SMA Directional Coupler | #B | 1-18GHz | Jan. 07, 2022 | Nov. 05, 2022 ~ Nov. 17, 2022 | Jan. 06, 2023 | Conducted (TH03-HY) |

# 6 Uncertainty of Evaluation

**Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **3.31 dB** |

**Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **3.25 dB** |

**Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **3.81 dB** |

# Appendix A. Test Results of Conducted Test

## Conducted Output Power(Average power) and EIRP

**<Main Antenna>**

**<SCS 15kHz>**

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 10 | 1 | 1 | PI/2 BPSK | 24.87 | 25.17 | 24.72 | 27.03 | 0.5047 |
| 10 | 1 | 50 | | 25.01 | 25.19 | 24.87 | | |
| 10 | 25 | 12 | | 24.90 | 25.12 | 24.83 | | |
| 10 | 1 | 1 | QPSK | 24.84 | 25.18 | 24.79 | | |
| 10 | 1 | 50 | | 25.02 | 25.24 | 24.97 | | |
| 10 | 25 | 12 | | 24.96 | 25.21 | 24.86 | | |
| 10 | 1 | 1 | 16-QAM | 24.00 | 24.39 | 23.94 | 26.18 | 0.4150 |
| 10 | 1 | 1 | 64-QAM | 22.42 | 22.55 | 22.24 | | |
| 10 | 1 | 1 | 256-QAM | 20.37 | 20.70 | 20.33 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 15 | 1 | 1 | PI/2 BPSK | 24.95 | 25.24 | 24.89 | 27.19 | 0.5236 |
| 15 | 1 | 77 | | 25.19 | 25.15 | 24.98 | | |
| 15 | 36 | 18 | | 25.27 | 25.39 | 25.07 | | |
| 15 | 1 | 1 | QPSK | 25.07 | 25.34 | 25.02 | | |
| 15 | 1 | 77 | | 25.20 | 25.33 | 25.12 | | |
| 15 | 36 | 18 | | 25.20 | 25.40 | 25.08 | | |
| 15 | 1 | 1 | 16-QAM | 23.98 | 24.29 | 24.06 | 26.08 | 0.4055 |
| 15 | 1 | 1 | 64-QAM | 22.63 | 22.66 | 22.41 | | |
| 15 | 1 | 1 | 256-QAM | 20.45 | 20.86 | 20.62 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 20 | 1 | 1 | PI/2 BPSK | 24.96 | 25.20 | 24.74 | 27.22 | 0.5272 |
| 20 | 1 | 104 | | 25.13 | 25.08 | 24.88 | | |
| 20 | 50 | 25 | | 25.33 | 25.38 | 25.03 | | |
| 20 | 1 | 1 | QPSK | 25.07 | 25.33 | 24.91 | | |
| 20 | 1 | 104 | | 25.21 | 25.33 | 25.08 | | |
| 20 | 50 | 25 | | 25.19 | 25.43 | 25.04 | | |
| 20 | 1 | 1 | 16-QAM | 23.97 | 24.33 | 23.83 | 26.12 | 0.4093 |
| 20 | 1 | 1 | 64-QAM | 22.48 | 22.65 | 22.12 | | |
| 20 | 1 | 1 | 256-QAM | 20.40 | 20.80 | 20.28 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 10 | 1 | 1 | PI/2 BPSK | 25.55 | 25.78 | 25.77 | 28.63 | 0.7295 |
| 10 | 1 | 50 | | 25.76 | 25.84 | 25.82 | | |
| 10 | 25 | 12 | | 25.75 | 25.91 | 25.89 | | |
| 10 | 1 | 1 | QPSK | 25.72 | 25.91 | 25.87 | | |
| 10 | 1 | 50 | | 25.87 | 26.06 | 25.93 | | |
| 10 | 25 | 12 | | 25.70 | 25.94 | 25.87 | | |
| 10 | 1 | 1 | 16-QAM | 24.65 | 24.85 | 24.79 | 27.42 | 0.5521 |
| 10 | 1 | 1 | 64-QAM | 23.14 | 23.21 | 23.19 | | |
| 10 | 1 | 1 | 256-QAM | 21.07 | 21.42 | 21.30 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 15 | 1 | 1 | PI/2 BPSK | 25.70 | 25.89 | 26.02 | 28.76 | 0.7516 |
| 15 | 1 | 77 | | 25.97 | 26.00 | 26.07 | | |
| 15 | 36 | 18 | | 26.13 | 26.11 | 26.19 | | |
| 15 | 1 | 1 | QPSK | 25.88 | 26.09 | 26.17 | | |
| 15 | 1 | 77 | | 26.10 | 26.18 | 26.19 | | |
| 15 | 36 | 18 | | 25.98 | 26.11 | 26.17 | | |
| 15 | 1 | 1 | 16-QAM | 24.94 | 25.06 | 25.08 | 27.65 | 0.5821 |
| 15 | 1 | 1 | 64-QAM | 23.60 | 23.35 | 23.33 | | |
| 15 | 1 | 1 | 256-QAM | 21.43 | 21.57 | 21.60 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 20 | 1 | 1 | PI/2 BPSK | 25.70 | 25.83 | 25.92 | 28.72 | 0.7447 |
| 20 | 1 | 104 | | 26.01 | 25.87 | 25.97 | | |
| 20 | 50 | 25 | | 26.14 | 26.10 | 26.11 | | |
| 20 | 1 | 1 | QPSK | 25.87 | 25.99 | 26.04 | | |
| 20 | 1 | 104 | | 26.10 | 26.15 | 26.10 | | |
| 20 | 50 | 25 | | 26.05 | 26.13 | 26.12 | | |
| 20 | 1 | 1 | 16-QAM | 24.73 | 25.00 | 25.03 | 27.60 | 0.5754 |
| 20 | 1 | 1 | 64-QAM | 23.30 | 23.25 | 23.25 | | |
| 20 | 1 | 1 | 256-QAM | 21.23 | 21.46 | 21.52 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

<SCS 30kHz>

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 10 | 1 | 1 | PI/2 BPSK | 24.75 | 25.06 | 24.70 | 26.91 | 0.4909 |
| 10 | 1 | 22 | | 24.82 | 24.99 | 24.71 | | |
| 10 | 12 | 6 | | 24.93 | 25.12 | 24.82 | | |
| 10 | 1 | 1 | QPSK | 24.74 | 25.04 | 24.65 | | |
| 10 | 1 | 22 | | 24.81 | 24.98 | 24.70 | | |
| 10 | 12 | 6 | | 24.91 | 25.12 | 24.82 | | |
| 10 | 1 | 1 | 16-QAM | 23.78 | 24.05 | 23.73 | 25.84 | 0.3837 |
| 10 | 1 | 1 | 64-QAM | 22.25 | 22.52 | 22.18 | | |
| 10 | 1 | 1 | 256-QAM | 20.46 | 20.76 | 20.41 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 15 | 1 | 1 | PI/2 BPSK | 24.80 | 25.04 | 24.66 | 26.91 | 0.4909 |
| 15 | 1 | 36 | | 24.89 | 24.94 | 24.76 | | |
| 15 | 18 | 9 | | 24.92 | 25.12 | 24.88 | | |
| 15 | 1 | 1 | QPSK | 24.79 | 25.02 | 24.63 | | |
| 15 | 1 | 36 | | 24.84 | 24.94 | 24.77 | | |
| 15 | 18 | 9 | | 24.98 | 25.11 | 24.89 | | |
| 15 | 1 | 1 | 16-QAM | 23.76 | 24.12 | 23.60 | 25.91 | 0.3899 |
| 15 | 1 | 1 | 64-QAM | 22.27 | 22.53 | 22.17 | | |
| 15 | 1 | 1 | 256-QAM | 20.45 | 20.74 | 20.40 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 20 | 1 | 1 | PI/2 BPSK | 24.74 | 25.01 | 24.56 | 26.96 | 0.4966 |
| 20 | 1 | 49 | | 24.89 | 24.85 | 24.67 | | |
| 20 | 25 | 12 | | 25.02 | 25.14 | 24.83 | | |
| 20 | 1 | 1 | QPSK | 24.77 | 25.00 | 24.51 | | |
| 20 | 1 | 49 | | 24.87 | 24.86 | 24.67 | | |
| 20 | 25 | 12 | | 25.02 | 25.17 | 24.86 | | |
| 20 | 1 | 1 | 16-QAM | 23.78 | 24.01 | 23.58 | 25.80 | 0.3802 |
| 20 | 1 | 1 | 64-QAM | 22.30 | 22.55 | 22.05 | | |
| 20 | 1 | 1 | 256-QAM | 20.47 | 20.73 | 20.32 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 40 | 1 | 1 | PI/2 BPSK | 24.35 | 24.47 | 24.06 | 26.71 | 0.4688 |
| 40 | 1 | 104 | | 24.45 | 24.41 | 24.22 | | |
| 40 | 50 | 25 | | 24.86 | 24.85 | 24.52 | | |
| 40 | 1 | 1 | QPSK | 24.32 | 24.50 | 24.04 | | |
| 40 | 1 | 104 | | 24.41 | 24.34 | 24.24 | | |
| 40 | 50 | 25 | | 24.85 | 24.92 | 24.50 | | |
| 40 | 1 | 1 | 16-QAM | 23.34 | 23.52 | 22.83 | 25.31 | 0.3396 |
| 40 | 1 | 1 | 64-QAM | 21.85 | 21.99 | 21.52 | | |
| 40 | 1 | 1 | 256-QAM | 19.98 | 20.22 | 19.78 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 50 | 1 | 1 | PI/2 BPSK | 24.53 | 24.82 | 24.48 | 26.74 | 0.4721 |
| 50 | 1 | 131 | | 24.58 | 24.60 | 24.51 | | |
| 50 | 64 | 32 | | 24.76 | 24.95 | 24.66 | | |
| 50 | 1 | 1 | QPSK | 24.51 | 24.76 | 24.45 | | |
| 50 | 1 | 131 | | 24.64 | 24.62 | 24.53 | | |
| 50 | 64 | 32 | | 24.81 | 24.92 | 24.63 | | |
| 50 | 1 | 1 | 16-QAM | 23.49 | 23.65 | 23.48 | 25.44 | 0.3499 |
| 50 | 1 | 1 | 64-QAM | 21.99 | 22.16 | 22.01 | | |
| 50 | 1 | 1 | 256-QAM | 20.31 | 20.32 | 20.14 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 60 | 1 | 1 | PI/2 BPSK | 24.59 | 24.74 | 24.42 | 26.71 | 0.4688 |
| 60 | 1 | 160 | | 24.75 | 24.61 | 24.50 | | |
| 60 | 81 | 40 | | 24.89 | 24.91 | 24.52 | | |
| 60 | 1 | 1 | QPSK | 24.57 | 24.70 | 24.35 | | |
| 60 | 1 | 160 | | 24.82 | 24.64 | 24.52 | | |
| 60 | 81 | 40 | | 24.90 | 24.92 | 24.51 | | |
| 60 | 1 | 1 | 16-QAM | 23.63 | 23.74 | 23.51 | 25.53 | 0.3573 |
| 60 | 1 | 1 | 64-QAM | 22.06 | 22.28 | 21.96 | | |
| 60 | 1 | 1 | 256-QAM | 20.25 | 20.51 | 20.19 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 80 | 1 | 1 | PI/2 BPSK | 24.11 | 24.29 | 23.95 | 26.65 | 0.4624 |
| 80 | 1 | 215 | | 24.45 | 24.16 | 24.08 | | |
| 80 | 108 | 54 | | 24.78 | 24.83 | 24.43 | | |
| 80 | 1 | 1 | QPSK | 24.16 | 24.35 | 23.97 | | |
| 80 | 1 | 215 | | 24.51 | 24.24 | 24.12 | | |
| 80 | 108 | 54 | | 24.79 | 24.86 | 24.44 | | |
| 80 | 1 | 1 | 16-QAM | 23.26 | 23.34 | 22.96 | 25.13 | 0.3258 |
| 80 | 1 | 1 | 64-QAM | 21.85 | 21.65 | 21.48 | | |
| 80 | 1 | 1 | 256-QAM | 20.41 | 20.11 | 20.02 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 100 | 1 | 1 | PI/2 BPSK | 23.78 | 24.03 | 23.81 | 26.60 | 0.4571 |
| 100 | 1 | 271 | | 24.11 | 24.25 | 23.81 | | |
| 100 | 135 | 67 | | 24.71 | 24.78 | 24.43 | | |
| 100 | 1 | 1 | QPSK | 23.81 | 24.08 | 23.87 | | |
| 100 | 1 | 271 | | 24.19 | 23.89 | 23.90 | | |
| 100 | 135 | 67 | | 24.73 | 24.81 | 24.45 | | |
| 100 | 1 | 1 | 16-QAM | 22.91 | 23.15 | 22.95 | 24.94 | 0.3119 |
| 100 | 1 | 1 | 64-QAM | 21.71 | 21.50 | 21.24 | | |
| 100 | 1 | 1 | 256-QAM | 19.82 | 20.07 | 19.86 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 10 | 1 | 1 | PI/2 BPSK | 25.56 | 25.74 | 25.70 | 28.48 | 0.7047 |
| 10 | 1 | 22 | | 25.64 | 25.76 | 25.72 | | |
| 10 | 12 | 6 | | 25.74 | 25.90 | 25.87 | | |
| 10 | 1 | 1 | QPSK | 25.57 | 25.79 | 25.75 | | |
| 10 | 1 | 22 | | 25.67 | 25.78 | 25.74 | | |
| 10 | 12 | 6 | | 25.73 | 25.91 | 25.90 | | |
| 10 | 1 | 1 | 16-QAM | 24.71 | 24.87 | 24.82 | 27.44 | 0.5546 |
| 10 | 1 | 1 | 64-QAM | 23.07 | 23.21 | 23.16 | | |
| 10 | 1 | 1 | 256-QAM | 21.37 | 21.52 | 21.48 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 15 | 1 | 1 | PI/2 BPSK | 25.59 | 25.77 | 25.82 | 28.55 | 0.7161 |
| 15 | 1 | 36 | | 25.70 | 25.76 | 25.84 | | |
| 15 | 18 | 9 | | 25.82 | 25.91 | 25.96 | | |
| 15 | 1 | 1 | QPSK | 25.62 | 25.75 | 25.87 | | |
| 15 | 1 | 36 | | 25.74 | 25.78 | 25.86 | | |
| 15 | 18 | 9 | | 25.83 | 25.89 | 25.98 | | |
| 15 | 1 | 1 | 16-QAM | 24.72 | 24.89 | 24.97 | 27.54 | 0.5675 |
| 15 | 1 | 1 | 64-QAM | 23.01 | 23.24 | 23.37 | | |
| 15 | 1 | 1 | 256-QAM | 21.36 | 21.51 | 21.51 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 20 | 1 | 1 | PI/2 BPSK | 25.58 | 25.68 | 25.68 | 28.55 | 0.7161 |
| 20 | 1 | 49 | | 25.70 | 25.67 | 25.72 | | |
| 20 | 25 | 12 | | 25.83 | 25.93 | 25.95 | | |
| 20 | 1 | 1 | QPSK | 25.58 | 25.67 | 25.72 | | |
| 20 | 1 | 49 | | 25.76 | 25.67 | 25.71 | | |
| 20 | 25 | 12 | | 25.85 | 25.98 | 25.96 | | |
| 20 | 1 | 1 | 16-QAM | 24.82 | 24.52 | 24.77 | 27.39 | 0.5483 |
| 20 | 1 | 1 | 64-QAM | 23.25 | 23.10 | 23.17 | | |
| 20 | 1 | 1 | 256-QAM | 21.47 | 21.39 | 21.42 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 40 | 1 | 1 | PI/2 BPSK | 24.96 | 25.15 | 25.07 | 28.18 | 0.6577 |
| 40 | 1 | 104 | | 25.13 | 25.20 | 25.21 | | |
| 40 | 50 | 25 | | 25.58 | 25.57 | 25.57 | | |
| 40 | 1 | 1 | QPSK | 24.94 | 25.11 | 25.07 | | |
| 40 | 1 | 104 | | 25.21 | 25.24 | 25.20 | | |
| 40 | 50 | 25 | | 25.57 | 25.61 | 25.56 | | |
| 40 | 1 | 1 | 16-QAM | 23.98 | 24.13 | 24.02 | 26.70 | 0.4677 |
| 40 | 1 | 1 | 64-QAM | 22.38 | 22.59 | 22.45 | | |
| 40 | 1 | 1 | 256-QAM | 20.62 | 20.81 | 20.75 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 50 | 1 | 1 | PI/2 BPSK | 25.15 | 25.43 | 25.39 | 28.30 | 0.6761 |
| 50 | 1 | 131 | | 25.37 | 25.44 | 25.47 | | |
| 50 | 64 | 32 | | 25.57 | 25.68 | 25.72 | | |
| 50 | 1 | 1 | QPSK | 25.17 | 25.47 | 25.40 | | |
| 50 | 1 | 131 | | 25.42 | 25.53 | 25.51 | | |
| 50 | 64 | 32 | | 25.55 | 25.66 | 25.73 | | |
| 50 | 1 | 1 | 16-QAM | 24.15 | 24.47 | 24.21 | 27.04 | 0.5058 |
| 50 | 1 | 1 | 64-QAM | 22.64 | 22.92 | 22.79 | | |
| 50 | 1 | 1 | 256-QAM | 20.83 | 21.06 | 21.02 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 60 | 1 | 1 | PI/2 BPSK | 25.20 | 25.36 | 25.29 | 28.23 | 0.6653 |
| 60 | 1 | 160 | | 25.46 | 25.54 | 25.52 | | |
| 60 | 81 | 40 | | 25.66 | 25.62 | 25.63 | | |
| 60 | 1 | 1 | QPSK | 25.24 | 25.37 | 25.29 | | |
| 60 | 1 | 160 | | 25.51 | 25.55 | 25.54 | | |
| 60 | 81 | 40 | | 25.64 | 25.56 | 25.61 | | |
| 60 | 1 | 1 | 16-QAM | 24.25 | 24.36 | 24.33 | 26.93 | 0.4932 |
| 60 | 1 | 1 | 64-QAM | 22.72 | 22.81 | 22.76 | | |
| 60 | 1 | 1 | 256-QAM | 20.91 | 21.06 | 21.04 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 80 | 1 | 1 | PI/2 BPSK | 24.65 | 24.75 | 24.80 | 28.02 | 0.6339 |
| 80 | 1 | 215 | | 24.99 | 24.97 | 24.96 | | |
| 80 | 108 | 54 | | 25.44 | 25.41 | 25.36 | | |
| 80 | 1 | 1 | QPSK | 24.74 | 24.83 | 24.87 | | |
| 80 | 1 | 215 | | 25.06 | 25.04 | 25.04 | | |
| 80 | 108 | 54 | | 25.45 | 25.45 | 25.40 | | |
| 80 | 1 | 1 | 16-QAM | 23.78 | 23.91 | 23.91 | 26.48 | 0.4446 |
| 80 | 1 | 1 | 64-QAM | 22.14 | 22.25 | 22.29 | | |
| 80 | 1 | 1 | 256-QAM | 20.65 | 20.71 | 20.71 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 100 | 1 | 1 | PI/2 BPSK | | 24.37 | | 27.95 | 0.6237 |
| 100 | 1 | 271 | | | 24.71 | | | |
| 100 | 135 | 67 | | | 25.36 | | | |
| 100 | 1 | 1 | QPSK | | 24.46 | | | |
| 100 | 1 | 271 | | | 24.80 | | | |
| 100 | 135 | 67 | | | 25.38 | | | |
| 100 | 1 | 1 | 16-QAM | | 23.57 | | 26.14 | 0.4111 |
| 100 | 1 | 1 | 64-QAM | | 21.81 | | | |
| 100 | 1 | 1 | 256-QAM | | 20.41 | | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

<MIMO2 Antenna>

<SCS 15kHz>

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 10 | 1 | 1 | PI/2 BPSK | 23.94 | 23.99 | 23.84 | 24.69 | 0.2944 |
| 10 | 1 | 50 | | 24.12 | 24.02 | 24.01 | | |
| 10 | 25 | 12 | | 24.05 | 24.03 | 23.96 | | |
| 10 | 1 | 1 | QPSK | 23.96 | 24.02 | 23.88 | | |
| 10 | 1 | 50 | | 24.14 | 24.04 | 24.04 | | |
| 10 | 25 | 12 | | 24.04 | 24.01 | 23.97 | | |
| 10 | 1 | 1 | 16-QAM | 22.96 | 23.08 | 22.94 | 23.63 | 0.2307 |
| 10 | 1 | 1 | 64-QAM | 21.43 | 21.55 | 21.43 | | |
| 10 | 1 | 1 | 256-QAM | 19.01 | 19.08 | 18.93 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 15 | 1 | 1 | PI/2 BPSK | 24.04 | 24.12 | 23.92 | 24.83 | 0.3041 |
| 15 | 1 | 77 | | 24.22 | 24.07 | 24.09 | | |
| 15 | 36 | 18 | | 24.22 | 24.21 | 23.99 | | |
| 15 | 1 | 1 | QPSK | 24.11 | 24.16 | 24.02 | | |
| 15 | 1 | 77 | | 24.28 | 24.11 | 24.15 | | |
| 15 | 36 | 18 | | 24.21 | 24.19 | 24.15 | | |
| 15 | 1 | 1 | 16-QAM | 23.08 | 23.21 | 23.06 | 23.76 | 0.2377 |
| 15 | 1 | 1 | 64-QAM | 21.58 | 21.68 | 21.54 | | |
| 15 | 1 | 1 | 256-QAM | 19.12 | 19.27 | 19.14 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 20 | 1 | 1 | PI/2 BPSK | 24.03 | 24.12 | 23.81 | 24.80 | 0.3020 |
| 20 | 1 | 104 | | 24.17 | 24.05 | 24.08 | | |
| 20 | 50 | 25 | | 24.23 | 24.21 | 24.12 | | |
| 20 | 1 | 1 | QPSK | 24.06 | 24.13 | 23.84 | | |
| 20 | 1 | 104 | | 24.19 | 24.07 | 24.09 | | |
| 20 | 50 | 25 | | 24.25 | 24.24 | 24.13 | | |
| 20 | 1 | 1 | 16-QAM | 23.07 | 23.18 | 22.92 | 23.73 | 0.2360 |
| 20 | 1 | 1 | 64-QAM | 21.52 | 21.64 | 21.42 | | |
| 20 | 1 | 1 | 256-QAM | 19.18 | 19.23 | 18.94 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 10 | 1 | 1 | PI/2 BPSK | 25.32 | 25.37 | 25.27 | 26.34 | 0.4305 |
| 10 | 1 | 50 | | 25.54 | 25.48 | 25.47 | | |
| 10 | 25 | 12 | | 25.42 | 25.49 | 25.45 | | |
| 10 | 1 | 1 | QPSK | 25.24 | 25.37 | 25.29 | | |
| 10 | 1 | 50 | | 25.41 | 25.56 | 25.42 | | |
| 10 | 25 | 12 | | 25.39 | 25.51 | 25.48 | | |
| 10 | 1 | 1 | 16-QAM | 24.31 | 24.53 | 24.56 | 25.34 | 0.3420 |
| 10 | 1 | 1 | 64-QAM | 22.83 | 22.96 | 22.87 | | |
| 10 | 1 | 1 | 256-QAM | 20.79 | 20.95 | 20.78 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 15 | 1 | 1 | PI/2 BPSK | 25.42 | 25.43 | 25.51 | 26.45 | 0.4416 |
| 15 | 1 | 77 | | 25.67 | 25.53 | 25.56 | | |
| 15 | 36 | 18 | | 25.60 | 25.62 | 25.62 | | |
| 15 | 1 | 1 | QPSK | 25.45 | 25.44 | 25.51 | | |
| 15 | 1 | 77 | | 25.66 | 25.54 | 25.58 | | |
| 15 | 36 | 18 | | 25.61 | 25.63 | 25.65 | | |
| 15 | 1 | 1 | 16-QAM | 24.28 | 24.37 | 24.45 | 25.23 | 0.3334 |
| 15 | 1 | 1 | 64-QAM | 23.02 | 23.06 | 23.09 | | |
| 15 | 1 | 1 | 256-QAM | 20.78 | 20.81 | 21.98 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 20 | 1 | 1 | PI/2 BPSK | 25.38 | 25.41 | 25.39 | 26.42 | 0.4385 |
| 20 | 1 | 104 | | 25.62 | 25.56 | 25.48 | | |
| 20 | 50 | 25 | | 25.59 | 25.59 | 25.62 | | |
| 20 | 1 | 1 | QPSK | 25.39 | 25.46 | 25.42 | | |
| 20 | 1 | 104 | | 25.64 | 25.60 | 25.54 | | |
| 20 | 50 | 25 | | 25.61 | 25.63 | 25.61 | | |
| 20 | 1 | 1 | 16-QAM | 24.35 | 24.43 | 24.31 | 25.21 | 0.3319 |
| 20 | 1 | 1 | 64-QAM | 22.82 | 22.87 | 23.01 | | |
| 20 | 1 | 1 | 256-QAM | 20.68 | 20.79 | 20.84 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

<SCS 30kHz>

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 10 | 1 | 1 | PI/2 BPSK | 24.12 | 24.23 | 24.02 | 24.87 | 0.3069 |
| 10 | 1 | 22 | | 24.18 | 24.21 | 24.15 | | |
| 10 | 12 | 6 | | 24.25 | 24.32 | 24.19 | | |
| 10 | 1 | 1 | QPSK | 24.10 | 24.22 | 24.07 | | |
| 10 | 1 | 22 | | 24.19 | 24.16 | 24.12 | | |
| 10 | 12 | 6 | | 24.28 | 24.26 | 24.18 | | |
| 10 | 1 | 1 | 16-QAM | 23.07 | 23.23 | 23.01 | 23.78 | 0.2388 |
| 10 | 1 | 1 | 64-QAM | 21.62 | 21.74 | 21.46 | | |
| 10 | 1 | 1 | 256-QAM | 19.65 | 19.65 | 19.45 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 15 | 1 | 1 | PI/2 BPSK | 24.05 | 24.24 | 24.01 | 24.86 | 0.3062 |
| 15 | 1 | 36 | | 24.23 | 24.21 | 24.05 | | |
| 15 | 18 | 9 | | 24.31 | 24.29 | 24.22 | | |
| 15 | 1 | 1 | QPSK | 24.14 | 24.17 | 24.03 | | |
| 15 | 1 | 36 | | 24.28 | 24.16 | 24.13 | | |
| 15 | 18 | 9 | | 24.31 | 24.26 | 24.20 | | |
| 15 | 1 | 1 | 16-QAM | 23.13 | 23.17 | 23.01 | 23.72 | 0.2355 |
| 15 | 1 | 1 | 64-QAM | 21.62 | 21.64 | 21.68 | | |
| 15 | 1 | 1 | 256-QAM | 19.55 | 19.67 | 19.48 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 20 | 1 | 1 | PI/2 BPSK | 24.05 | 24.15 | 23.86 | 24.87 | 0.3069 |
| 20 | 1 | 49 | | 24.16 | 24.09 | 24.07 | | |
| 20 | 25 | 12 | | 24.26 | 24.30 | 24.17 | | |
| 20 | 1 | 1 | QPSK | 24.03 | 24.14 | 24.04 | | |
| 20 | 1 | 49 | | 24.12 | 24.07 | 23.87 | | |
| 20 | 25 | 12 | | 24.29 | 24.32 | 24.21 | | |
| 20 | 1 | 1 | 16-QAM | 22.95 | 23.14 | 22.87 | 23.69 | 0.2339 |
| 20 | 1 | 1 | 64-QAM | 21.54 | 21.62 | 21.43 | | |
| 20 | 1 | 1 | 256-QAM | 19.50 | 19.62 | 19.36 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 40 | 1 | 1 | PI/2 BPSK | 23.56 | 23.66 | 23.21 | 24.69 | 0.2944 |
| 40 | 1 | 104 | | 23.74 | 23.62 | 23.62 | | |
| 40 | 50 | 25 | | 24.14 | 23.99 | 23.75 | | |
| 40 | 1 | 1 | QPSK | 23.65 | 23.76 | 23.29 | | |
| 40 | 1 | 104 | | 23.43 | 23.63 | 23.67 | | |
| 40 | 50 | 25 | | 24.13 | 24.04 | 23.81 | | |
| 40 | 1 | 1 | 16-QAM | 22.56 | 22.65 | 22.19 | 23.2 | 0.2089 |
| 40 | 1 | 1 | 64-QAM | 21.09 | 21.22 | 20.74 | | |
| 40 | 1 | 1 | 256-QAM | 19.12 | 19.15 | 18.78 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 50 | 1 | 1 | PI/2 BPSK | 23.78 | 23.98 | 23.62 | 24.66 | 0.2924 |
| 50 | 1 | 131 | | 24.06 | 23.96 | 23.79 | | |
| 50 | 64 | 32 | | 24.05 | 24.04 | 23.78 | | |
| 50 | 1 | 1 | QPSK | 23.75 | 23.89 | 23.61 | | |
| 50 | 1 | 131 | | 24.11 | 23.85 | 23.79 | | |
| 50 | 64 | 32 | | 24.07 | 24.06 | 23.82 | | |
| 50 | 1 | 1 | 16-QAM | 22.85 | 22.98 | 22.63 | 23.53 | 0.2254 |
| 50 | 1 | 1 | 64-QAM | 21.26 | 21.36 | 21.11 | | |
| 50 | 1 | 1 | 256-QAM | 19.25 | 19.41 | 19.08 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 60 | 1 | 1 | PI/2 BPSK | 23.81 | 23.79 | 23.56 | 24.65 | 0.2917 |
| 60 | 1 | 160 | | 24.06 | 23.92 | 23.93 | | |
| 60 | 81 | 40 | | 24.10 | 24.02 | 23.76 | | |
| 60 | 1 | 1 | QPSK | 23.78 | 23.98 | 23.56 | | |
| 60 | 1 | 160 | | 24.02 | 23.91 | 24.02 | | |
| 60 | 81 | 40 | | 24.06 | 24.05 | 23.76 | | |
| 60 | 1 | 1 | 16-QAM | 22.78 | 22.89 | 22.56 | 23.44 | 0.2208 |
| 60 | 1 | 1 | 64-QAM | 21.32 | 21.43 | 21.18 | | |
| 60 | 1 | 1 | 256-QAM | 19.31 | 19.64 | 19.05 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 80 | 1 | 1 | PI/2 BPSK | 23.38 | 23.54 | 23.06 | 24.57 | 0.2864 |
| 80 | 1 | 215 | | 23.65 | 23.55 | 23.49 | | |
| 80 | 108 | 54 | | 23.91 | 24.02 | 23.75 | | |
| 80 | 1 | 1 | QPSK | 23.32 | 23.38 | 23.08 | | |
| 80 | 1 | 215 | | 23.63 | 23.47 | 23.54 | | |
| 80 | 108 | 54 | | 23.95 | 23.96 | 23.69 | | |
| 80 | 1 | 1 | 16-QAM | 22.21 | 22.38 | 22.06 | 22.93 | 0.1963 |
| 80 | 1 | 1 | 64-QAM | 21.21 | 21.32 | 21.05 | | |
| 80 | 1 | 1 | 256-QAM | 19.18 | 19.13 | 18.78 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 100 | 1 | 1 | PI/2 BPSK | 23.06 | 23.04 | 22.84 | 24.51 | 0.2825 |
| 100 | 1 | 271 | | 23.39 | 23.15 | 23.24 | | |
| 100 | 135 | 67 | | 23.96 | 23.94 | 23.65 | | |
| 100 | 1 | 1 | QPSK | 23.08 | 23.06 | 22.87 | | |
| 100 | 1 | 271 | | 23.35 | 23.16 | 23.32 | | |
| 100 | 135 | 67 | | 23.10 | 23.95 | 23.69 | | |
| 100 | 1 | 1 | 16-QAM | 22.03 | 21.98 | 21.58 | 22.58 | 0.1811 |
| 100 | 1 | 1 | 64-QAM | 20.94 | 20.95 | 20.87 | | |
| 100 | 1 | 1 | 256-QAM | 18.92 | 18.95 | 18.79 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 10 | 1 | 1 | PI/2 BPSK | 25.34 | 25.44 | 25.43 | 26.39 | 0.4355 |
| 10 | 1 | 22 | | 25.50 | 25.46 | 25.45 | | |
| 10 | 12 | 6 | | 25.59 | 25.61 | 25.54 | | |
| 10 | 1 | 1 | QPSK | 25.41 | 25.49 | 25.49 | | |
| 10 | 1 | 22 | | 25.49 | 25.54 | 25.56 | | |
| 10 | 12 | 6 | | 25.57 | 25.58 | 25.56 | | |
| 10 | 1 | 1 | 16-QAM | 24.34 | 24.46 | 24.43 | 25.24 | 0.3342 |
| 10 | 1 | 1 | 64-QAM | 22.83 | 23.16 | 23.12 | | |
| 10 | 1 | 1 | 256-QAM | 20.79 | 20.93 | 20.85 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 15 | 1 | 1 | PI/2 BPSK | 25.35 | 25.45 | 25.45 | 26.43 | 0.4395 |
| 15 | 1 | 36 | | 25.52 | 25.51 | 24.46 | | |
| 15 | 18 | 9 | | 25.56 | 25.63 | 25.54 | | |
| 15 | 1 | 1 | QPSK | 25.35 | 25.49 | 25.47 | | |
| 15 | 1 | 36 | | 25.54 | 25.53 | 25.49 | | |
| 15 | 18 | 9 | | 25.65 | 25.59 | 25.52 | | |
| 15 | 1 | 1 | 16-QAM | 24.35 | 24.38 | 24.49 | 25.27 | 0.3365 |
| 15 | 1 | 1 | 64-QAM | 22.98 | 22.92 | 22.98 | | |
| 15 | 1 | 1 | 256-QAM | 20.84 | 20.95 | 20.87 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 20 | 1 | 1 | PI/2 BPSK | 25.32 | 25.34 | 25.34 | 26.43 | 0.4395 |
| 20 | 1 | 49 | | 25.51 | 25.40 | 25.39 | | |
| 20 | 25 | 12 | | 25.56 | 25.61 | 25.65 | | |
| 20 | 1 | 1 | QPSK | 25.32 | 25.41 | 25.40 | | |
| 20 | 1 | 49 | | 25.53 | 25.51 | 25.45 | | |
| 20 | 25 | 12 | | 25.63 | 25.64 | 25.61 | | |
| 20 | 1 | 1 | 16-QAM | 24.33 | 24.38 | 24.38 | 25.16 | 0.3281 |
| 20 | 1 | 1 | 64-QAM | 22.83 | 23.04 | 22.93 | | |
| 20 | 1 | 1 | 256-QAM | 20.79 | 20.84 | 20.84 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 40 | 1 | 1 | PI/2 BPSK | 24.76 | 24.86 | 24.83 | 26.16 | 0.4130 |
| 40 | 1 | 104 | | 24.93 | 25.01 | 24.89 | | |
| 40 | 50 | 25 | | 25.38 | 25.28 | 25.28 | | |
| 40 | 1 | 1 | QPSK | 24.85 | 24.82 | 24.84 | | |
| 40 | 1 | 104 | | 25.01 | 24.98 | 24.95 | | |
| 40 | 50 | 25 | | 25.36 | 25.27 | 25.27 | | |
| 40 | 1 | 1 | 16-QAM | 23.76 | 23.82 | 23.78 | 24.60 | 0.2884 |
| 40 | 1 | 1 | 64-QAM | 22.27 | 22.45 | 22.29 | | |
| 40 | 1 | 1 | 256-QAM | 20.21 | 20.26 | 20.28 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 50 | 1 | 1 | PI/2 BPSK | 24.88 | 25.14 | 25.13 | 26.17 | 0.4140 |
| 50 | 1 | 131 | | 25.28 | 25.32 | 25.04 | | |
| 50 | 64 | 32 | | 25.39 | 25.36 | 25.37 | | |
| 50 | 1 | 1 | QPSK | 24.91 | 25.18 | 25.17 | | |
| 50 | 1 | 131 | | 25.31 | 23.32 | 25.14 | | |
| 50 | 64 | 32 | | 25.38 | 25.33 | 25.39 | | |
| 50 | 1 | 1 | 16-QAM | 23.89 | 24.16 | 24.12 | 26.37 | 0.4335 |
| 50 | 1 | 1 | 64-QAM | 22.42 | 22.74 | 22.73 | | |
| 50 | 1 | 1 | 256-QAM | 20.35 | 20.58 | 25.59 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 60 | 1 | 1 | PI/2 BPSK | 24.99 | 25.13 | 25.03 | 26.19 | 0.4159 |
| 60 | 1 | 160 | | 25.30 | 25.29 | 25.26 | | |
| 60 | 81 | 40 | | 25.41 | 25.29 | 25.32 | | |
| 60 | 1 | 1 | QPSK | 25.05 | 25.11 | 25.02 | | |
| 60 | 1 | 160 | | 25.38 | 25.32 | 25.31 | | |
| 60 | 81 | 40 | | 25.39 | 25.31 | 25.33 | | |
| 60 | 1 | 1 | 16-QAM | 24.02 | 24.07 | 24.02 | 24.85 | 0.3055 |
| 60 | 1 | 1 | 64-QAM | 22.57 | 22.63 | 22.58 | | |
| 60 | 1 | 1 | 256-QAM | 20.48 | 20.59 | 20.47 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 80 | 1 | 1 | PI/2 BPSK | 24.46 | 24.56 | 24.56 | 25.95 | 0.3936 |
| 80 | 1 | 215 | | 24.72 | 24.69 | 24.71 | | |
| 80 | 108 | 54 | | 25.17 | 25.16 | 25.12 | | |
| 80 | 1 | 1 | QPSK | 24.48 | 24.62 | 24.59 | | |
| 80 | 1 | 215 | | 24.75 | 24.78 | 24.76 | | |
| 80 | 108 | 54 | | 25.16 | 25.16 | 25.14 | | |
| 80 | 1 | 1 | 16-QAM | 23.45 | 23.51 | 23.53 | 24.31 | 0.2698 |
| 80 | 1 | 1 | 64-QAM | 22.13 | 22.28 | 22.24 | | |
| 80 | 1 | 1 | 256-QAM | 20.24 | 20.32 | 20.34 | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

| NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 100 | 1 | 1 | PI/2 BPSK | | 24.14 | | 25.88 | 0.3873 |
| 100 | 1 | 271 | | | 24.41 | | | |
| 100 | 135 | 67 | | | 25.07 | | | |
| 100 | 1 | 1 | QPSK | | 24.12 | | | |
| 100 | 1 | 271 | | | 24.42 | | | |
| 100 | 135 | 67 | | | 25.10 | | | |
| 100 | 1 | 1 | 16-QAM | | 24.18 | | 24.96 | 0.3133 |
| 100 | 1 | 1 | 64-QAM | | 21.68 | | | |
| 100 | 1 | 1 | 256-QAM | | 19.98 | | | |
| Limit | EIRP < 1W | | | Result | | | Pass | |

# Appendix B. Test Results of Radiated Test

## 5G NR n77 (HPUE) (Ant. Main)

| 5G NR n77(HPUE) / 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 7403 | -40.70 | -13 | -27.70 | -71.6 | -48.00 | 1.94 | 11.39 | H |
| | 11104 | -35.76 | -13 | -22.76 | -72.89 | -41.99 | 2.24 | 10.62 | H |
| | 14805 | -28.59 | -13 | -15.59 | -71.51 | -36.63 | 2.58 | 12.77 | H |
| | 18506 | -62.82 | -13 | -49.82 | -74.7 | -75.02 | 3.24 | 17.59 | H |
| | 22208 | -60.70 | -13 | -47.70 | -76.43 | -73.89 | 3.52 | 18.86 | H |
| | 25909 | -58.64 | -13 | -45.64 | -77.46 | -71.65 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7402 | -40.64 | -13 | -27.64 | -71.64 | -47.95 | 1.94 | 11.40 | V |
| | 11103 | -35.36 | -13 | -22.36 | -72.44 | -41.59 | 2.24 | 10.62 | V |
| | 14808 | -27.45 | -13 | -14.45 | -71.48 | -35.49 | 2.58 | 12.78 | V |
| | 18506 | -62.85 | -13 | -49.85 | -74.51 | -75.05 | 3.24 | 17.59 | V |
| | 22208 | -61.14 | -13 | -48.14 | -76.47 | -74.33 | 3.52 | 18.86 | V |
| | 25909 | -58.95 | -13 | -45.95 | -77.46 | -71.96 | 3.92 | 19.08 | V |
| Middle | 7583 | -41.81 | -13 | -28.81 | -72.33 | -49.30 | 1.90 | 11.53 | H |
| | 11374 | -34.78 | -13 | -21.78 | -72.2 | -41.23 | 2.35 | 10.95 | H |
| | 15165 | -28.48 | -13 | -15.48 | -70.74 | -37.65 | 2.60 | 13.93 | H |
| | 18956 | -63.39 | -13 | -50.39 | -74.96 | -75.13 | 3.26 | 17.14 | H |
| | 22748 | -60.09 | -13 | -47.09 | -76.62 | -73.09 | 3.55 | 18.70 | H |
| | 26539 | -57.46 | -13 | -44.46 | -77.15 | -70.04 | 3.93 | 18.65 | H |
| | | | | | | | | | H |
| | 7583 | -41.32 | -13 | -28.32 | -72.01 | -48.81 | 1.90 | 11.53 | V |
| | 11374 | -34.49 | -13 | -21.49 | -71.98 | -40.94 | 2.35 | 10.95 | V |
| | 15165 | -27.41 | -13 | -14.41 | -70.75 | -36.58 | 2.60 | 13.93 | V |
| | 18956 | -63.75 | -13 | -50.75 | -75.09 | -75.49 | 3.26 | 17.14 | V |
| | 22748 | -60.51 | -13 | -47.51 | -76.66 | -73.51 | 3.55 | 18.70 | V |
| | 26539 | -57.98 | -13 | -44.98 | -77.29 | -70.56 | 3.93 | 18.65 | V |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highest | 7763 | -41.30 | -13 | -28.30 | -72.09 | -48.95 | 1.88 | 11.68 | H |
| | 11644 | -33.82 | -13 | -20.82 | -71.97 | -40.83 | 2.46 | 11.62 | H |
| | 15525 | -29.86 | -13 | -16.86 | -70.94 | -40.48 | 2.70 | 15.47 | H |
| | 19406 | -63.32 | -13 | -50.32 | -75.63 | -75.37 | 3.23 | 17.42 | H |
| | 23288 | -59.15 | -13 | -46.15 | -76.26 | -72.02 | 3.63 | 18.66 | H |
| | 27169 | -57.16 | -13 | -44.16 | -77.73 | -70.45 | 3.93 | 19.37 | H |
| | | | | | | | | | H |
| | 7763 | -40.52 | -13 | -27.52 | -71.58 | -48.17 | 1.88 | 11.68 | V |
| | 11644 | -34.09 | -13 | -21.09 | -72.15 | -41.10 | 2.46 | 11.62 | V |
| | 15525 | -29.93 | -13 | -16.93 | -71.28 | -40.55 | 2.70 | 15.47 | V |
| | 19406 | -63.05 | -13 | -50.05 | -75.1 | -75.10 | 3.23 | 17.42 | V |
| | 23288 | -59.51 | -13 | -46.51 | -76.3 | -72.38 | 3.63 | 18.66 | V |
| | 27169 | -57.31 | -13 | -44.31 | -77.52 | -70.60 | 3.93 | 19.37 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n78 (HPUE) (Ant. Main)

| 5G NR n78(HPUE) / 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 7402 | -41.38 | -13 | -28.38 | -72.29 | -48.69 | 1.94 | 11.40 | H |
| | 11103 | -35.96 | -13 | -22.96 | -73.09 | -42.19 | 2.24 | 10.62 | H |
| | 14808 | -28.99 | -13 | -15.99 | -71.9 | -37.03 | 2.58 | 12.78 | H |
| | 18506 | -62.74 | -13 | -49.74 | -74.62 | -74.94 | 3.24 | 17.59 | H |
| | 22207 | -60.82 | -13 | -47.82 | -76.55 | -74.01 | 3.52 | 18.86 | H |
| | 25908 | -58.49 | -13 | -45.49 | -77.31 | -71.50 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7402 | -41.29 | -13 | -28.29 | -72.29 | -48.60 | 1.94 | 11.40 | V |
| | 11103 | -35.91 | -13 | -22.91 | -72.99 | -42.14 | 2.24 | 10.62 | V |
| | 14808 | -27.87 | -13 | -14.87 | -71.9 | -35.91 | 2.58 | 12.78 | V |
| | 18506 | -62.83 | -13 | -49.83 | -74.49 | -75.03 | 3.24 | 17.59 | V |
| | 22207 | -61.23 | -13 | -48.23 | -76.56 | -74.42 | 3.52 | 18.86 | V |
| | 25908 | -59.00 | -13 | -46.00 | -77.51 | -72.01 | 3.92 | 19.08 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n77 (HPUE) (Ant. MIMO 1 SRS)

| 5G NR n77(HPUE)/ 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 7403 | -41.15 | -13 | -28.15 | -72.05 | -48.45 | 1.94 | 11.39 | H |
| | 11104 | -36.15 | -13 | -23.15 | -73.28 | -42.38 | 2.24 | 10.62 | H |
| | 14805 | -29.08 | -13 | -16.08 | -72 | -37.12 | 2.58 | 12.77 | H |
| | 18506 | -63.43 | -13 | -50.43 | -75.31 | -75.63 | 3.24 | 17.59 | H |
| | 22207 | -61.49 | -13 | -48.49 | -77.22 | -74.68 | 3.52 | 18.86 | H |
| | 25908 | -59.48 | -13 | -46.48 | -78.3 | -72.49 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7403 | -41.36 | -13 | -28.36 | -72.36 | -48.66 | 1.94 | 11.39 | V |
| | 11104 | -36.06 | -13 | -23.06 | -73.14 | -42.29 | 2.24 | 10.62 | V |
| | 14805 | -27.82 | -13 | -14.82 | -71.85 | -35.86 | 2.58 | 12.77 | V |
| | 18506 | -63.55 | -13 | -50.55 | -75.21 | -75.75 | 3.24 | 17.59 | V |
| | 22207 | -61.48 | -13 | -48.48 | -76.81 | -74.67 | 3.52 | 18.86 | V |
| | 25908 | -59.26 | -13 | -46.26 | -77.77 | -72.27 | 3.92 | 19.08 | V |
| | | | | | | | | | V |
| Middle | 7583 | -41.73 | -13 | -28.73 | -72.25 | -49.22 | 1.90 | 11.53 | H |
| | 11374 | -35.30 | -13 | -22.30 | -72.72 | -41.75 | 2.35 | 10.95 | H |
| | 15165 | -29.20 | -13 | -16.20 | -71.46 | -38.37 | 2.60 | 13.93 | H |
| | 18956 | -65.13 | -13 | -52.13 | -76.7 | -76.87 | 3.26 | 17.14 | H |
| | 22747 | -60.62 | -13 | -47.62 | -77.15 | -73.62 | 3.55 | 18.70 | H |
| | 26538 | -57.69 | -13 | -44.69 | -77.38 | -70.26 | 3.93 | 18.65 | H |
| | | | | | | | | | H |
| | 7583 | -41.81 | -13 | -28.81 | -72.5 | -49.30 | 1.90 | 11.53 | V |
| | 11374 | -34.97 | -13 | -21.97 | -72.46 | -41.42 | 2.35 | 10.95 | V |
| | 15165 | -28.30 | -13 | -15.30 | -71.64 | -37.47 | 2.60 | 13.93 | V |
| | 18956 | -64.49 | -13 | -51.49 | -75.83 | -76.23 | 3.26 | 17.14 | V |
| | 22747 | -61.18 | -13 | -48.18 | -77.33 | -74.18 | 3.55 | 18.70 | V |
| | 26538 | -58.06 | -13 | -45.06 | -77.37 | -70.63 | 3.93 | 18.65 | V |
| | | | | | | | | | V |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highest | 7763 | -41.30 | -13 | -28.30 | -72.09 | -48.95 | 1.88 | 11.68 | H |
| | 11644 | -34.29 | -13 | -21.29 | -72.44 | -41.30 | 2.46 | 11.62 | H |
| | 15525 | -30.36 | -13 | -17.36 | -71.44 | -40.98 | 2.70 | 15.47 | H |
| | 19406 | -64.36 | -13 | -51.36 | -76.67 | -76.41 | 3.23 | 17.42 | H |
| | 23287 | -60.07 | -13 | -47.07 | -77.18 | -72.94 | 3.63 | 18.66 | H |
| | 27168 | -57.27 | -13 | -44.27 | -77.84 | -70.56 | 3.93 | 19.37 | H |
| | | | | | | | | | H |
| | 7763 | -41.26 | -13 | -28.26 | -72.32 | -48.91 | 1.88 | 11.68 | V |
| | 11644 | -33.63 | -13 | -20.63 | -71.69 | -40.64 | 2.46 | 11.62 | V |
| | 15525 | -29.93 | -13 | -16.93 | -71.27 | -40.55 | 2.70 | 15.47 | V |
| | 19406 | -64.67 | -13 | -51.67 | -76.72 | -76.72 | 3.23 | 17.42 | V |
| | 23287 | -60.52 | -13 | -47.52 | -77.3 | -73.39 | 3.63 | 18.66 | V |
| | 27168 | -57.92 | -13 | -44.92 | -78.13 | -71.21 | 3.93 | 19.37 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n78 (HPUE) (Ant. MIMO 1 SRS)

| 5G NR n78(HPUE)/ 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 7402 | -41.43 | -13 | -28.43 | -72.34 | -48.74 | 1.94 | 11.40 | H |
| | 11103 | -35.55 | -13 | -22.55 | -72.68 | -41.78 | 2.24 | 10.62 | H |
| | 14808 | -29.16 | -13 | -16.16 | -72.07 | -37.20 | 2.58 | 12.78 | H |
| | 18506 | -63.31 | -13 | -50.31 | -75.19 | -75.51 | 3.24 | 17.59 | H |
| | 22207 | -60.81 | -13 | -47.81 | -76.54 | -74.00 | 3.52 | 18.86 | H |
| | 25908 | -59.33 | -13 | -46.33 | -78.15 | -72.34 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7402 | -41.45 | -13 | -28.45 | -72.45 | -48.76 | 1.94 | 11.40 | V |
| | 11103 | -36.09 | -13 | -23.09 | -73.17 | -42.32 | 2.24 | 10.62 | V |
| | 14808 | -27.91 | -13 | -14.91 | -71.94 | -35.95 | 2.58 | 12.78 | V |
| | 18506 | -63.79 | -13 | -50.79 | -75.45 | -75.99 | 3.24 | 17.59 | V |
| | 22207 | -61.89 | -13 | -48.89 | -77.22 | -75.08 | 3.52 | 18.86 | V |
| | 25908 | -59.63 | -13 | -46.63 | -78.14 | -72.64 | 3.92 | 19.08 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n77 (HPUE) (Ant. MIMO 2)

| 5G NR n77(HPUE)/ 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 7403 | -41.13 | -13 | -28.13 | -72.03 | -48.43 | 1.94 | 11.39 | H |
| | 11104 | -36.13 | -13 | -23.13 | -73.26 | -42.36 | 2.24 | 10.62 | H |
| | 14805 | -29.30 | -13 | -16.30 | -72.22 | -37.34 | 2.58 | 12.77 | H |
| | 18506 | -62.59 | -13 | -49.59 | -74.47 | -74.79 | 3.24 | 17.59 | H |
| | 22208 | -60.84 | -13 | -47.84 | -76.57 | -74.03 | 3.52 | 18.86 | H |
| | 25909 | -58.32 | -13 | -45.32 | -77.14 | -71.33 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7403 | -41.62 | -13 | -28.62 | -72.62 | -48.92 | 1.94 | 11.39 | V |
| | 11104 | -35.94 | -13 | -22.94 | -73.02 | -42.17 | 2.24 | 10.62 | V |
| | 14805 | -27.98 | -13 | -14.98 | -72.01 | -36.02 | 2.58 | 12.77 | V |
| | 18506 | -62.76 | -13 | -49.76 | -74.42 | -74.96 | 3.24 | 17.59 | V |
| | 22208 | -60.37 | -13 | -47.37 | -75.7 | -73.56 | 3.52 | 18.86 | V |
| | 25909 | -58.27 | -13 | -45.27 | -76.78 | -71.28 | 3.92 | 19.08 | V |
| | | | | | | | | | V |
| Middle | 7583 | -41.94 | -13 | -28.94 | -72.46 | -49.43 | 1.90 | 11.53 | H |
| | 11374 | -35.46 | -13 | -22.46 | -72.88 | -41.91 | 2.35 | 10.95 | H |
| | 15165 | -29.48 | -13 | -16.48 | -71.74 | -38.65 | 2.60 | 13.93 | H |
| | 18956 | -63.28 | -13 | -50.28 | -74.85 | -75.02 | 3.26 | 17.14 | H |
| | 22748 | -59.30 | -13 | -46.30 | -75.83 | -72.30 | 3.55 | 18.70 | H |
| | 26539 | -57.56 | -13 | -44.56 | -77.25 | -70.14 | 3.93 | 18.65 | H |
| | | | | | | | | | H |
| | 7583 | -41.99 | -13 | -28.99 | -72.68 | -49.48 | 1.90 | 11.53 | V |
| | 11374 | -35.53 | -13 | -22.53 | -73.02 | -41.98 | 2.35 | 10.95 | V |
| | 15165 | -28.18 | -13 | -15.18 | -71.52 | -37.35 | 2.60 | 13.93 | V |
| | 18956 | -63.29 | -13 | -50.29 | -74.63 | -75.03 | 3.26 | 17.14 | V |
| | 22748 | -60.13 | -13 | -47.13 | -76.28 | -73.13 | 3.55 | 18.70 | V |
| | 26539 | -57.87 | -13 | -44.87 | -77.18 | -70.45 | 3.93 | 18.65 | V |
| | | | | | | | | | V |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highest | 7763 | -41.50 | -13 | -28.50 | -72.29 | -49.15 | 1.88 | 11.68 | H |
| | 11644 | -34.44 | -13 | -21.44 | -72.59 | -41.45 | 2.46 | 11.62 | H |
| | 15525 | -30.59 | -13 | -17.59 | -71.67 | -41.21 | 2.70 | 15.47 | H |
| | 19406 | -63.03 | -13 | -50.03 | -75.34 | -75.08 | 3.23 | 17.42 | H |
| | 23288 | -58.81 | -13 | -45.81 | -75.92 | -71.68 | 3.63 | 18.66 | H |
| | 27169 | -57.30 | -13 | -44.30 | -77.87 | -70.59 | 3.93 | 19.37 | H |
| | | | | | | | | | H |
| | 7763 | -40.84 | -13 | -27.84 | -71.9 | -48.49 | 1.88 | 11.68 | V |
| | 11644 | -34.61 | -13 | -21.61 | -72.67 | -41.62 | 2.46 | 11.62 | V |
| | 15525 | -29.86 | -13 | -16.86 | -71.21 | -40.48 | 2.70 | 15.47 | V |
| | 19406 | -63.38 | -13 | -50.38 | -75.43 | -75.43 | 3.23 | 17.42 | V |
| | 23288 | -59.67 | -13 | -46.67 | -76.46 | -72.54 | 3.63 | 18.66 | V |
| | 27169 | -57.14 | -13 | -44.14 | -77.35 | -70.43 | 3.93 | 19.37 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n78 (HPUE) (Ant. MIMO 2)

| 5G NR n78(HPUE)/ 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 7402 | -41.25 | -13 | -28.25 | -72.16 | -48.56 | 1.94 | 11.40 | H |
| | 11103 | -35.95 | -13 | -22.95 | -73.08 | -42.18 | 2.24 | 10.62 | H |
| | 14808 | -28.72 | -13 | -15.72 | -71.63 | -36.76 | 2.58 | 12.78 | H |
| | 18506 | -62.71 | -13 | -49.71 | -74.59 | -74.91 | 3.24 | 17.59 | H |
| | 22207 | -60.39 | -13 | -47.39 | -76.12 | -73.58 | 3.52 | 18.86 | H |
| | 25908 | -58.75 | -13 | -45.75 | -77.57 | -71.76 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7402 | -41.04 | -13 | -28.04 | -72.04 | -48.35 | 1.94 | 11.40 | V |
| | 11103 | -35.93 | -13 | -22.93 | -73.01 | -42.16 | 2.24 | 10.62 | V |
| | 14808 | -28.00 | -13 | -15.00 | -72.03 | -36.04 | 2.58 | 12.78 | V |
| | 18506 | -62.67 | -13 | -49.67 | -74.33 | -74.87 | 3.24 | 17.59 | V |
| | 22207 | -61.11 | -13 | -48.11 | -76.44 | -74.30 | 3.52 | 18.86 | V |
| | 25908 | -58.58 | -13 | -45.58 | -77.09 | -71.59 | 3.92 | 19.08 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n77 MIMO(HPUE) (Ant. MIMO 2 + Ant. Main)

| 5G NR n77(HPUE)/ 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 7403 | -41.09 | -13 | -28.09 | -71.99 | -48.39 | 1.94 | 11.39 | H |
| | 11104 | -35.35 | -13 | -22.35 | -72.48 | -41.58 | 2.24 | 10.62 | H |
| | 14805 | -28.35 | -13 | -15.35 | -71.27 | -36.39 | 2.58 | 12.77 | H |
| | 18506 | -62.27 | -13 | -49.27 | -74.15 | -74.47 | 3.24 | 17.59 | H |
| | 22208 | -60.17 | -13 | -47.17 | -75.9 | -73.36 | 3.52 | 18.86 | H |
| | 25909 | -58.36 | -13 | -45.36 | -77.18 | -71.37 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7403 | -40.74 | -13 | -27.74 | -71.74 | -48.04 | 1.94 | 11.39 | V |
| | 11104 | -35.45 | -13 | -22.45 | -72.53 | -41.68 | 2.24 | 10.62 | V |
| | 14805 | -27.75 | -13 | -14.75 | -71.78 | -35.79 | 2.58 | 12.77 | V |
| | 18506 | -62.54 | -13 | -49.54 | -74.2 | -74.74 | 3.24 | 17.59 | V |
| | 22208 | -60.74 | -13 | -47.74 | -76.07 | -73.93 | 3.52 | 18.86 | V |
| | 25909 | -58.49 | -13 | -45.49 | -77 | -71.50 | 3.92 | 19.08 | V |
| | | | | | | | | | V |
| Middle | 7583 | -41.96 | -13 | -28.96 | -72.48 | -49.45 | 1.90 | 11.53 | H |
| | 11374 | -35.15 | -13 | -22.15 | -72.57 | -41.60 | 2.35 | 10.95 | H |
| | 15165 | -29.45 | -13 | -16.45 | -71.71 | -38.62 | 2.60 | 13.93 | H |
| | 18956 | -63.46 | -13 | -50.46 | -75.03 | -75.20 | 3.26 | 17.14 | H |
| | 22748 | -59.74 | -13 | -46.74 | -76.27 | -72.74 | 3.55 | 18.70 | H |
| | 26539 | -57.72 | -13 | -44.72 | -77.41 | -70.30 | 3.93 | 18.65 | H |
| | | | | | | | | | H |
| | 7583 | -41.90 | -13 | -28.90 | -72.59 | -49.39 | 1.90 | 11.53 | V |
| | 11374 | -35.38 | -13 | -22.38 | -72.87 | -41.83 | 2.35 | 10.95 | V |
| | 15165 | -28.16 | -13 | -15.16 | -71.5 | -37.33 | 2.60 | 13.93 | V |
| | 18956 | -64.14 | -13 | -51.14 | -75.48 | -75.88 | 3.26 | 17.14 | V |
| | 22748 | -60.57 | -13 | -47.57 | -76.72 | -73.57 | 3.55 | 18.70 | V |
| | 26539 | -57.68 | -13 | -44.68 | -76.99 | -70.26 | 3.93 | 18.65 | V |
| | | | | | | | | | V |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highest | 7763 | -41.32 | -13 | -28.32 | -72.11 | -48.97 | 1.88 | 11.68 | H |
| | 11644 | -34.21 | -13 | -21.21 | -72.36 | -41.22 | 2.46 | 11.62 | H |
| | 15525 | -30.08 | -13 | -17.08 | -71.16 | -40.70 | 2.70 | 15.47 | H |
| | 19406 | -63.29 | -13 | -50.29 | -75.6 | -75.34 | 3.23 | 17.42 | H |
| | 22288 | -59.37 | -13 | -46.37 | -76.48 | -72.54 | 3.53 | 18.84 | H |
| | 27169 | -57.22 | -13 | -44.22 | -77.79 | -70.51 | 3.93 | 19.37 | H |
| | | | | | | | | | H |
| | 7763 | -40.93 | -13 | -27.93 | -71.99 | -48.58 | 1.88 | 11.68 | V |
| | 11644 | -34.15 | -13 | -21.15 | -72.21 | -41.16 | 2.46 | 11.62 | V |
| | 15525 | -30.00 | -13 | -17.00 | -71.35 | -40.62 | 2.70 | 15.47 | V |
| | 19406 | -63.32 | -13 | -50.32 | -75.37 | -75.37 | 3.23 | 17.42 | V |
| | 22288 | -59.38 | -13 | -46.38 | -76.17 | -72.55 | 3.53 | 18.84 | V |
| | 27169 | -57.68 | -13 | -44.68 | -77.89 | -70.97 | 3.93 | 19.37 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n78 MIMO(HPUE) (Ant. MIMO 2 + Ant. Main)

| 5G NR n78MIMO(HPUE)/ 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 7402 | -40.94 | -13 | -27.94 | -71.85 | -48.25 | 1.94 | 11.40 | H |
| | 11103 | -35.77 | -13 | -22.77 | -72.9 | -42.00 | 2.24 | 10.62 | H |
| | 14808 | -28.37 | -13 | -15.37 | -71.28 | -36.41 | 2.58 | 12.78 | H |
| | 18506 | -62.58 | -13 | -49.58 | -74.46 | -74.78 | 3.24 | 17.59 | H |
| | 22207 | -60.44 | -13 | -47.44 | -76.17 | -73.63 | 3.52 | 18.86 | H |
| | 25908 | -58.65 | -13 | -45.65 | -77.47 | -71.66 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7402 | -40.61 | -13 | -27.61 | -71.61 | -47.92 | 1.94 | 11.40 | V |
| | 11103 | -35.84 | -13 | -22.84 | -72.92 | -42.07 | 2.24 | 10.62 | V |
| | 14808 | -27.82 | -13 | -14.82 | -71.85 | -35.86 | 2.58 | 12.78 | V |
| | 18506 | -62.84 | -13 | -49.84 | -74.5 | -75.04 | 3.24 | 17.59 | V |
| | 22207 | -60.73 | -13 | -47.73 | -76.06 | -73.92 | 3.52 | 18.86 | V |
| | 25908 | -58.60 | -13 | -45.60 | -77.11 | -71.61 | 3.92 | 19.08 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n77(HPUE) (Ant. Aux. SRS)

| 5G NR n77(HPUE)/ 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 7403 | -41.13 | -13 | -28.13 | -72.03 | -48.43 | 1.94 | 11.39 | H |
| | 11104 | -35.90 | -13 | -22.90 | -73.03 | -42.13 | 2.24 | 10.62 | H |
| | 14805 | -28.70 | -13 | -15.70 | -71.62 | -36.74 | 2.58 | 12.77 | H |
| | 18506 | -63.08 | -13 | -50.08 | -74.96 | -75.28 | 3.24 | 17.59 | H |
| | 22208 | -60.92 | -13 | -47.92 | -76.65 | -74.11 | 3.52 | 18.86 | H |
| | 25909 | -59.03 | -13 | -46.03 | -77.85 | -72.04 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7403 | -41.20 | -13 | -28.20 | -72.2 | -48.50 | 1.94 | 11.39 | V |
| | 11104 | -34.24 | -13 | -21.24 | -71.32 | -40.47 | 2.24 | 10.62 | V |
| | 14805 | -27.69 | -13 | -14.69 | -71.72 | -35.73 | 2.58 | 12.77 | V |
| | 18506 | -63.25 | -13 | -50.25 | -74.91 | -75.45 | 3.24 | 17.59 | V |
| | 22208 | -61.55 | -13 | -48.55 | -76.88 | -74.74 | 3.52 | 18.86 | V |
| | 25909 | -58.93 | -13 | -45.93 | -77.44 | -71.94 | 3.92 | 19.08 | V |
| | | | | | | | | | V |
| Middle | 7583 | -42.04 | -13 | -29.04 | -72.56 | -49.53 | 1.90 | 11.53 | H |
| | 11374 | -35.23 | -13 | -22.23 | -72.65 | -41.68 | 2.35 | 10.95 | H |
| | 15165 | -28.90 | -13 | -15.90 | -71.16 | -38.07 | 2.60 | 13.93 | H |
| | 18956 | -64.14 | -13 | -51.14 | -75.71 | -75.88 | 3.26 | 17.14 | H |
| | 22748 | -60.61 | -13 | -47.61 | -77.14 | -73.61 | 3.55 | 18.70 | H |
| | 26539 | -57.54 | -13 | -44.54 | -77.23 | -70.12 | 3.93 | 18.65 | H |
| | | | | | | | | | H |
| | 7583 | -41.96 | -13 | -28.96 | -72.65 | -49.45 | 1.90 | 11.53 | V |
| | 11374 | -35.08 | -13 | -22.08 | -72.57 | -41.53 | 2.35 | 10.95 | V |
| | 15165 | -28.01 | -13 | -15.01 | -71.35 | -37.18 | 2.60 | 13.93 | V |
| | 18956 | -64.67 | -13 | -51.67 | -76.01 | -76.41 | 3.26 | 17.14 | V |
| | 22748 | -60.77 | -13 | -47.77 | -76.92 | -73.77 | 3.55 | 18.70 | V |
| | 26539 | -58.27 | -13 | -45.27 | -77.58 | -70.85 | 3.93 | 18.65 | V |
| | | | | | | | | | V |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highest | 7763 | -41.05 | -13 | -28.05 | -71.84 | -48.70 | 1.88 | 11.68 | H |
| | 11644 | -33.92 | -13 | -20.92 | -72.07 | -40.93 | 2.46 | 11.62 | H |
| | 15525 | -29.83 | -13 | -16.83 | -70.91 | -40.45 | 2.70 | 15.47 | H |
| | 19406 | -63.35 | -13 | -50.35 | -75.66 | -75.40 | 3.23 | 17.42 | H |
| | 23288 | -59.57 | -13 | -46.57 | -76.68 | -72.44 | 3.63 | 18.66 | H |
| | 27169 | -57.15 | -13 | -44.15 | -77.72 | -70.44 | 3.93 | 19.37 | H |
| | | | | | | | | | H |
| | 7763 | -40.74 | -13 | -27.74 | -71.8 | -48.39 | 1.88 | 11.68 | V |
| | 11644 | -33.81 | -13 | -20.81 | -71.87 | -40.82 | 2.46 | 11.62 | V |
| | 15525 | -29.75 | -13 | -16.75 | -71.1 | -40.37 | 2.70 | 15.47 | V |
| | 19406 | -63.72 | -13 | -50.72 | -75.77 | -75.77 | 3.23 | 17.42 | V |
| | 23288 | -59.76 | -13 | -46.76 | -76.55 | -72.63 | 3.63 | 18.66 | V |
| | 27169 | -57.83 | -13 | -44.83 | -78.04 | -71.12 | 3.93 | 19.37 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# 5G NR n78(HPUE) (Ant. Aux. SRS)

| 5G NR n78(HPUE)/ 100MHz / PI/2 BPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Margin ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 7402 | -40.96 | -13 | -27.96 | -71.87 | -48.27 | 1.94 | 11.40 | H |
| | 11103 | -35.85 | -13 | -22.85 | -72.98 | -42.08 | 2.24 | 10.62 | H |
| | 14808 | -28.95 | -13 | -15.95 | -71.86 | -36.99 | 2.58 | 12.78 | H |
| | 18506 | -62.94 | -13 | -49.94 | -74.82 | -75.14 | 3.24 | 17.59 | H |
| | 22207 | -61.14 | -13 | -48.14 | -76.87 | -74.33 | 3.52 | 18.86 | H |
| | 25908 | -58.95 | -13 | -45.95 | -77.77 | -71.96 | 3.92 | 19.08 | H |
| | | | | | | | | | H |
| | 7402 | -40.91 | -13 | -27.91 | -71.91 | -48.22 | 1.94 | 11.40 | V |
| | 11103 | -36.83 | -13 | -23.83 | -72.91 | -43.06 | 2.24 | 10.62 | V |
| | 14808 | -27.62 | -13 | -14.62 | -71.65 | -35.66 | 2.58 | 12.78 | V |
| | 18506 | -62.77 | -13 | -49.77 | -74.43 | -74.97 | 3.24 | 17.59 | V |
| | 22207 | -61.08 | -13 | -48.08 | -76.41 | -74.27 | 3.52 | 18.86 | V |
| | 25908 | -59.32 | -13 | -46.32 | -77.83 | -72.33 | 3.92 | 19.08 | V |
| | | | | | | | | | V |

**Remark:** Spurious emissions within 30-1000MHz were found more than 20dB below limit line.