

# TESTREPORT

Applicant Name : Inrico Technologies Co., Ltd  
Address : 3/F, Building No.118, High Tech Industrial Park, 72 Guowei Road, Luohu District, Shenzhen, China  
ReportNumber: SZ1211009-52872E-RF-00D  
FCC ID: 2AIV6-I-10

## Test Standard (s)

FCC PART 27;FCC PART 22H; FCC PART 24

## Sample Description

Product Type: Body Worn Camera  
Model No.: I-10  
Trade Mark: Inrico  
Date Received: 2021/10/09  
Date of Test: 2021/10/27~2021/11/28  
Report Date: 2021/11/29

|              |       |
|--------------|-------|
| Test Result: | Pass* |
|--------------|-------|

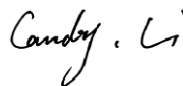
\* In the configuration tested, the EUT complied with the standards above.

**Prepared and Checked By:**

**Approved By:**



Black Ding  
EMC Engineer



Candy Li  
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

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FCC -2G,3G,4G

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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency Range          | GSM 850: 824-849MHz(TX); 869-894MHz(RX)<br>PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX)<br>WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX)<br>WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX)<br>LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX)<br>LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX)<br>LTE Band 5: 824-849MHz(TX); 869-894MHz(RX)<br>LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX)<br>LTE Band 17: 704-716MHz(TX); 734-746MHz(RX)<br>LTE Band 38: 2570-2620MHz(TX/RX)<br>LTE Band 41: 2545-2655MHz(TX/RX) |
| Modulation Technique     | 2G: GMSK/8PSK<br>3G: BPSK, QPSK, 16QAM<br>4G: QPSK, 16QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Antenna Specification*   | GSM850/WCDMA B5/LTE B5:-0.45dBi;<br>PCS1900/WCDMA B2/LTE B2:-0.38dBi;<br>LTE B4:-0.45dBi;<br>LTE B7:-0.28dBi;LTE B17:-0.67dBi;<br>LTE B38/B41:-0.32dBi;(provided by the applicant)                                                                                                                                                                                                                                                                                                                                     |
| Voltage Range            | DC 3.8V from battery or DC 5.0V from adapter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Sample serial number     | SZ1211009-52872E-RF-S1(for radiated test)<br>SZ1211009-52872E-RF-S2 ((RF Conducted Test)Assigned by ATC)                                                                                                                                                                                                                                                                                                                                                                                                               |
| Sample/EUT Status        | Good condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Normal/Extreme Condition | L.V.: Low Voltage 3.5V <sub>DC</sub> ;<br>N.V.: Normal Voltage3.8V <sub>DC</sub> ;<br>H.V.: High Voltage 4.35V <sub>DC</sub> ;                                                                                                                                                                                                                                                                                                                                                                                         |
| Adapter information      | Model:LM-601E-050200U01CE<br>Input: AC 100-240V, 50/60Hz, 0.35A<br>Output: DC 5.0V,2000mA                                                                                                                                                                                                                                                                                                                                                                                                                              |

### Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H and Part24-Subpart E and Subpart 27of the Federal Communication Commissions rules.

The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

## Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services  
 Part 24 Subpart E - Personal Communication Services  
 Part 27 – Miscellaneous wireless communications services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

## Measurement Uncertainty

| Parameter                          |               | Uncertainty            |
|------------------------------------|---------------|------------------------|
| Occupied Channel Bandwidth         |               | 5%                     |
| RF Frequency                       |               | $0.082 \times 10^{-7}$ |
| RF output power, conducted         |               | 0.73dB                 |
| Unwanted Emission, conducted       |               | 1.6dB                  |
| AC Power Lines Conducted Emissions |               | 2.72dB                 |
| Emissions,<br>Radiated             | 9kHz - 30MHz  | 2.66dB                 |
|                                    | 30MHz - 1GHz  | 4.28dB                 |
|                                    | 1GHz- 18GHz   | 4.98dB                 |
|                                    | 18GHz-26.5GHz | 5.06dB                 |
|                                    | 26.5GHz-40GHz | 4.72dB                 |
| Temperature                        |               | 1 °C                   |
| Humidity                           |               | 6%                     |
| Supply voltages                    |               | 0.4%                   |

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

## Test Facility

The Test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISED), the Registration Number is 5077A.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

The test items were performed with the EUT operating at testing mode. Test was performed with channels as below table:

| Frequency Band | Bandwidth (MHz) | Test Frequency (MHz) |        |        |
|----------------|-----------------|----------------------|--------|--------|
|                |                 | Low                  | Middle | High   |
| GSM850         | 0.25            | 824.2                | 836.6  | 848.8  |
| PCS1900        | 0.25            | 1850.2               | 1880   | 1909.8 |
| WCDMA B2       | 4.2             | 1852.4               | 1880   | 1907.6 |
| WCDMA B5       | 4.2             | 826.4                | 836.6  | 846.6  |
| LTE B2         | 1.4             | 1850.7               | 1880   | 1909.3 |
|                | 3               | 1851.5               | 1880   | 1908.5 |
|                | 5               | 1852.5               | 1880   | 1907.5 |
|                | 10              | 1855                 | 1880   | 1905   |
|                | 15              | 1857.5               | 1880   | 1902.5 |
|                | 20              | 1860                 | 1880   | 1900   |
| LTE B4         | 1.4             | 1710.7               | 1732.5 | 1754.3 |
|                | 3               | 1711.5               | 1732.5 | 1753.5 |
|                | 5               | 1712.5               | 1732.5 | 1752.5 |
|                | 10              | 1715                 | 1732.5 | 1750   |
|                | 15              | 1717.5               | 1732.5 | 1747.5 |
|                | 20              | 1720                 | 1732.5 | 1745   |
| LTE B5         | 1.4             | 824.7                | 836.5  | 848.3  |
|                | 3               | 825.5                | 836.5  | 847.5  |
|                | 5               | 826.5                | 836.5  | 846.5  |
|                | 10              | 829                  | 836.5  | 844    |
| LTE B7         | 5               | 2502.5               | 2535   | 2567.5 |
|                | 10              | 2505                 | 2535   | 2565   |
|                | 15              | 2507.5               | 2535   | 2562.5 |
|                | 20              | 2510                 | 2535   | 2560   |
| LTE B17        | 5               | 706.5                | 710    | 713.5  |
|                | 10              | 709                  | 710    | 711    |

| Frequency Band | Bandwidth (MHz) | Test Frequency (MHz) |        |        |
|----------------|-----------------|----------------------|--------|--------|
|                |                 | Low                  | Middle | High   |
| LTE B38        | 5               | 2572.5               | 2595   | 2617.5 |
|                | 10              | 2575                 | 2595   | 2615   |
|                | 15              | 2577.5               | 2595   | 2612.5 |
|                | 20              | 2580                 | 2595   | 2610   |
| LTE B41        | 5               | 2547.5               | 2600   | 2652.5 |
|                | 10              | 2550                 | 2600   | 2650   |
|                | 15              | 2552.5               | 2600   | 2647.5 |
|                | 20              | 2555                 | 2600   | 2645   |

### Equipment Modifications

No modification was made to the EUT.

### Support Equipment List and Details

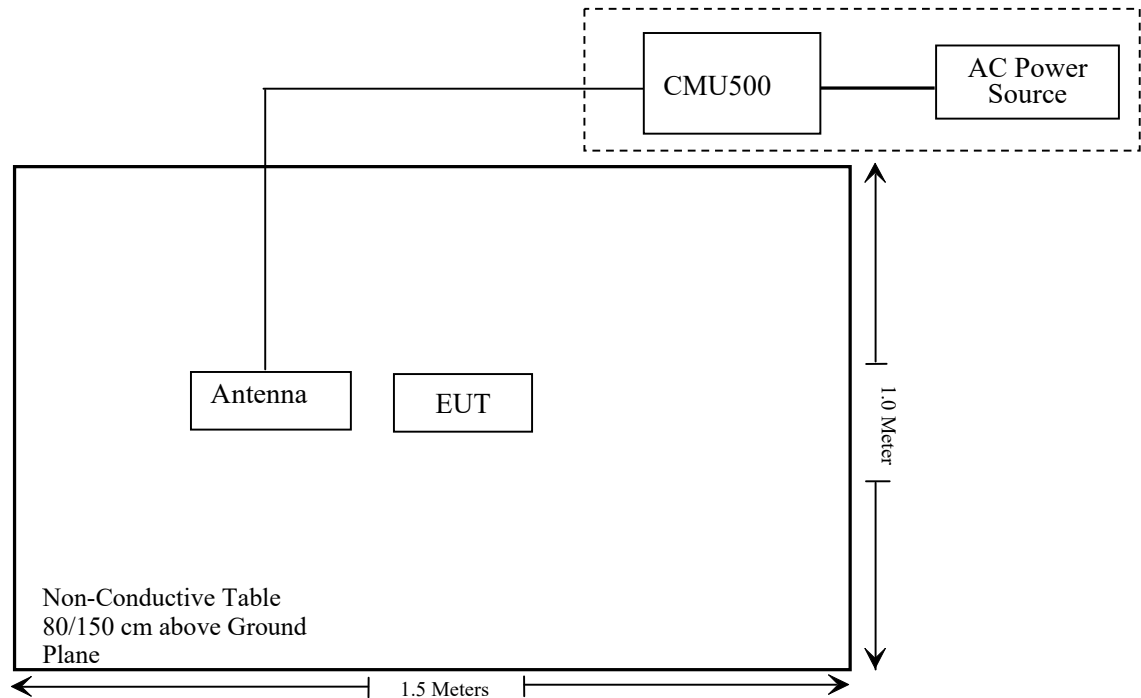
| Manufacturer    | Description                         | Model  | Serial Number |
|-----------------|-------------------------------------|--------|---------------|
| Rohde & Schwarz | Wideband Radio Communication tester | CMW500 | 146520        |

### Support Cable Description

| Cable Description                  | Length (m) | From / Port | To     |
|------------------------------------|------------|-------------|--------|
| Un-shielded Un-detachable AC cable | 1.2        | AC Power    | CMU200 |

Block Diagram of Test Setup

Test Set up Connect:



**SUMMARY OF TEST RESULTS**

| FCC Rules                                          | Description of Test                    | Result         |
|----------------------------------------------------|----------------------------------------|----------------|
| §1.1307 , §2.1093                                  | RF Exposure (SAR)                      | Compliant*     |
| §2.1046; § 22.913 (a);<br>§ 24.232 (c); §27.50;    | RF Output Power                        | Compliant      |
| § 2.1047                                           | Modulation Characteristics             | Not Applicable |
| § 2.1049; § 22.905;<br>§ 22.917; § 24.238; §27.53; | Occupied Bandwidth                     | Compliant      |
| § 2.1051; § 22.917 (a);<br>§ 24.238 (a); §27.53    | Spurious Emissions at Antenna Terminal | Compliant      |
| § 2.1053; § 22.917 (a);<br>§ 24.238 (a); §27.53    | Field Strength of Spurious Radiation   | Compliant      |
| § 22.917 (a);<br>§ 24.238 (a); §27.53              | Band Edge                              | Compliant      |
| § 2.1055; § 22.355;<br>§ 24.235; §27.54;           | Frequency stability                    | Compliant      |

Note: \* Please refer to SAR report number: SZ1211009-51697E-SA



**TEST EQUIPMENT LIST**

| Manufacturer                  | Description       | Model                | Serial Number | Calibration Date | Calibration Due Date |
|-------------------------------|-------------------|----------------------|---------------|------------------|----------------------|
| <b>Radiated Emission Test</b> |                   |                      |               |                  |                      |
| Rohde& Schwarz                | Test Receiver     | ESR                  | 101817        | 2020/12/24       | 2021/12/23           |
| Rohde&Schwarz                 | Spectrum Analyzer | FSV40                | 101495        | 2020/12/24       | 2021/12/23           |
| SONOMA INSTRUMENT             | Amplifier         | 310 N                | 186131        | 2020/12/25       | 2021/12/24           |
| A.H. Systems, inc.            | Preamplifier      | PAM-0118P            | 531           | 2021/11/09       | 2022/11/08           |
| Quinstar                      | Amplifier         | QLW-184055<br>36-J0  | 15964001002   | 2020/11/28       | 2021/11/27           |
| Anritsu Corp                  | 50 Coaxial Switch | MP59B                | 6100237248    | 2020/12/25       | 2021/12/24           |
| Schwarzbeck                   | Bilog Antenna     | VULB9163             | 9163-194      | 2020/01/05       | 2023/01/04           |
| Schwarzbeck                   | Bilog Antenna     | VULB9163             | 9163-323      | 2020/01/05       | 2023/01/04           |
| Schwarzbeck                   | Horn Antenna      | BBHA9120D            | 9120D-655     | 2020/01/05       | 2023/01/04           |
| Schwarzbeck                   | Horn Antenna      | BBHA9120D            | 9120D-1067    | 2020/01/05       | 2023/01/04           |
| PASTERNAK                     | Horn Antenn       | PE9852/2F-20         | 1120          | 2020/01/05       | 2023/01/04           |
| PASTERNAK                     | Horn Antenn       | PE9852/2F-20         | 1120          | 2020/01/05       | 2023/01/04           |
| Unknown                       | RF Coaxial Cable  | N-5m                 | No.3          | 2020/12/25       | 2021/12/24           |
| Unknown                       | RF Coaxial Cable  | N-5m                 | No.4          | 2020/12/25       | 2021/12/24           |
| Unknown                       | RF Coaxial Cable  | N-1m                 | No.5          | 2020/12/25       | 2021/12/24           |
| Unknown                       | RF Coaxial Cable  | N-1m                 | No.6          | 2020/12/25       | 2021/12/24           |
| Wainwright                    | High Pass Filter  | WHKX3.6/18<br>G-10SS | 5             | 2020/12/25       | 2021/12/24           |
| CD                            | High Pass Filter  | HPM-1.2/18G<br>-60   | 110           | 2020/12/25       | 2021/12/24           |
| Anritsu                       | Signal Generator  | 68369B               | 004114        | 2021/7/31        | 2022/7/30            |

| Manufacturer             | Description                         | Model                | Serial Number | Calibration Date | Calibration Due Date |
|--------------------------|-------------------------------------|----------------------|---------------|------------------|----------------------|
| <b>RF Conducted Test</b> |                                     |                      |               |                  |                      |
| Rohde&Schwarz            | Spectrum Analyzer                   | FSV-40               | 101495        | 2020/12/24       | 2021/12/23           |
| Mini-Circuits            | Power Splitter                      | DC-18000MHz          | SF10944151S   | 2020/12/25       | 2021/12/24           |
| Rohde & Schwarz          | Wideband Radio Communication Tester | CMW500               | 154606        | 2020/12/25       | 2021/12/24           |
| HP                       | 6dB Attenuator                      | 8493B 6dB Attenuator | 2708A 04769   | 2020/12/25       | 2021/12/24           |
| Gongwen                  | Temp. & Humid. Chamber              | JB913R               | GZ-WS004      | 2020/12/25       | 2021/12/24           |
| Unknown                  | RF Cable                            | Unknown              | Unknown       | Each time        | /                    |

\* Statement of Traceability: Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

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## **FCC §1.1307(b)&§2.1093 - RF EXPOSURE INFORMATION**

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### **Applicable Standard**

FCC§1.1310 and §2.1093.

### **Test Result**

Compliant, please refer to the SAR report: SZ1211009-51697E-SA.

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## **FCC§2.1047 - MODULATION CHARACTERISTIC**

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According to FCC § 2.1047(d), Part 22H & 24E& 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

**FCC § 2.1046, § 22.913 (a), § 24.232 (c), § 27.50- RF OUTPUT POWER****Applicable Standard**

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (C), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

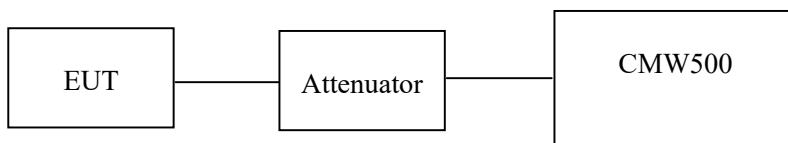
According to §27.50(c), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2500-2570MHz & 2496-2690MHz.

**Test Procedure**

*Conducted method:*

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.

**Test Data****Environmental Conditions**

|                    |          |
|--------------------|----------|
| Temperature:       | 27.6°C   |
| Relative Humidity: | 58%      |
| ATM Pressure:      | 101.0kPa |

*The testing was performed by Black Ding from 2021-10-27 to 2021-10-28.*

**Conducted Power****Cellular Band (Part 22H)**

| Mode | Channel | Frequency (MHz) | Average Output Power (dBm) | ERP(dBm) | Limit (dBm) |
|------|---------|-----------------|----------------------------|----------|-------------|
| GSM  | 128     | 824.2           | 31.4                       | 28.8     | 38.45       |
|      | 190     | 836.6           | 31.6                       | 29.0     | 38.45       |
|      | 251     | 848.8           | 31.7                       | 29.1     | 38.45       |

| Mode | Channel | Frequency (MHz) | Average Output Power (dBm) |         |         |         | ERP(dBm) |         |         |         | Limit (dBm) |
|------|---------|-----------------|----------------------------|---------|---------|---------|----------|---------|---------|---------|-------------|
|      |         |                 | 1 slot                     | 2 slots | 3 slots | 4 slots | 1 slot   | 2 slots | 3 slots | 4 slots |             |
| GPRS | 128     | 824.2           | 31.35                      | 31.02   | 29.72   | 28.52   | 28.75    | 28.42   | 27.12   | 25.92   | 38.45       |
|      | 190     | 836.6           | 31.67                      | 31.32   | 29.93   | 28.77   | 29.07    | 28.72   | 27.33   | 26.17   | 38.45       |
|      | 251     | 848.8           | 31.78                      | 31.44   | 30.07   | 28.81   | 29.18    | 28.84   | 27.47   | 26.21   | 38.45       |

| Mode  | Channel | Frequency (MHz) | Average Output Power (dBm) |         |         |         | ERP(dBm) |         |         |         | Limit (dBm) |
|-------|---------|-----------------|----------------------------|---------|---------|---------|----------|---------|---------|---------|-------------|
|       |         |                 | 1 slot                     | 2 slots | 3 slots | 4 slots | 1 slot   | 2 slots | 3 slots | 4 slots |             |
| EGPRS | 128     | 824.2           | 27.09                      | 25.80   | 23.59   | 22.18   | 24.49    | 23.2    | 20.99   | 19.58   | 38.45       |
|       | 190     | 836.6           | 27.08                      | 25.71   | 23.42   | 22.14   | 24.48    | 23.11   | 20.82   | 19.54   | 38.45       |
|       | 251     | 848.8           | 27.18                      | 25.91   | 23.66   | 22.33   | 24.58    | 23.31   | 21.06   | 19.73   | 38.45       |

| Mode              | Test Mode | 3GPP Sub Test | Average Output Power (dBm) |       |       | ERP(dBm) |       |       |
|-------------------|-----------|---------------|----------------------------|-------|-------|----------|-------|-------|
|                   |           |               | Low                        | Mid   | High  | Low      | Mid   | High  |
| WCDMA<br>(Band 5) | RMC12.2k  |               | 22.85                      | 23.02 | 22.98 | 20.25    | 20.42 | 20.38 |
|                   | HSDPA     | 1             | 20.71                      | 20.57 | 20.78 | 18.11    | 17.97 | 18.18 |
|                   |           | 2             | 20.68                      | 20.54 | 20.55 | 18.08    | 17.94 | 17.95 |
|                   |           | 3             | 20.65                      | 20.61 | 20.56 | 18.05    | 18.01 | 17.96 |
|                   |           | 4             | 20.67                      | 20.54 | 20.53 | 18.07    | 17.94 | 17.93 |
|                   | HSUPA     | 1             | 21.08                      | 20.85 | 20.78 | 18.48    | 18.25 | 18.18 |
|                   |           | 2             | 21.01                      | 20.77 | 20.72 | 18.41    | 18.17 | 18.12 |
|                   |           | 3             | 21.02                      | 20.78 | 20.68 | 18.42    | 18.18 | 18.08 |
|                   |           | 4             | 20.99                      | 20.69 | 20.69 | 18.39    | 18.09 | 18.09 |
|                   |           | 5             | 20.64                      | 20.74 | 20.65 | 18.04    | 18.14 | 18.05 |
|                   | HSPA+     | 1             | 20.82                      | 20.71 | 20.67 | 18.22    | 18.11 | 18.07 |

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)  
 For GSM850 / WCDMA Band5: Antenna Gain = -0.45dBd = -2.6dBd (0dBd=2.15dBi)  
 Limit: ERP ≤ 38.45dBm

**PCS Band (Part 24E)**

| Mode | Channel | Frequency (MHz) | Average Output Power (dBm) | EIRP(dBm) | Limit (dBm) |
|------|---------|-----------------|----------------------------|-----------|-------------|
| GSM  | 512     | 1850.2          | 29.1                       | 28.72     | 33          |
|      | 661     | 1880.0          | 29.3                       | 28.92     | 33          |
|      | 810     | 1909.8          | 29.5                       | 29.12     | 33          |

| Mode | Channel | Frequency (MHz) | Average Output Power (dBm) |         |         |         | EIRP(dBm) |         |         |         | Limit (dBm) |
|------|---------|-----------------|----------------------------|---------|---------|---------|-----------|---------|---------|---------|-------------|
|      |         |                 | 1 slot                     | 2 slots | 3 slots | 4 slots | 1 slot    | 2 slots | 3 slots | 4 slots |             |
| GPRS | 512     | 1850.2          | 29.12                      | 28.32   | 26.47   | 25.37   | 28.74     | 27.94   | 26.09   | 24.99   | 33          |
|      | 661     | 1880.0          | 29.19                      | 28.42   | 26.57   | 25.51   | 28.81     | 28.04   | 26.19   | 25.13   | 33          |
|      | 810     | 1909.8          | 29.39                      | 28.64   | 26.86   | 25.78   | 29.01     | 28.26   | 26.48   | 25.40   | 33          |

| Mode  | Channel | Frequency (MHz) | Average Output Power (dBm) |         |         |         | EIRP(dBm) |         |         |         | Limit (dBm) |
|-------|---------|-----------------|----------------------------|---------|---------|---------|-----------|---------|---------|---------|-------------|
|       |         |                 | 1 slot                     | 2 slots | 3 slots | 4 slots | 1 slot    | 2 slots | 3 slots | 4 slots |             |
| EGPRS | 512     | 1850.2          | 25.46                      | 24.20   | 22.02   | 20.87   | 25.08     | 23.82   | 21.64   | 20.49   | 33          |
|       | 661     | 1880.0          | 26.05                      | 23.72   | 21.53   | 20.20   | 25.67     | 23.34   | 21.15   | 19.82   | 33          |
|       | 810     | 1909.8          | 25.87                      | 24.58   | 22.42   | 21.00   | 25.49     | 24.20   | 22.04   | 20.62   | 33          |

| Mode              | Test Mode | 3GPP Sub Test | Average Output Power (dBm) |       |       | EIRP(dBm) |       |       |
|-------------------|-----------|---------------|----------------------------|-------|-------|-----------|-------|-------|
|                   |           |               | Low                        | Mid   | High  | Low       | Mid   | High  |
| WCDMA<br>(Band 2) | RMC12.2k  |               | 22.53                      | 22.59 | 22.58 | 22.15     | 22.21 | 22.2  |
|                   | HSDPA     | 1             | 20.45                      | 20.44 | 20.58 | 20.07     | 20.06 | 20.20 |
|                   |           | 2             | 20.42                      | 20.43 | 20.5  | 20.04     | 20.05 | 20.12 |
|                   |           | 3             | 20.47                      | 20.38 | 20.52 | 20.09     | 20.00 | 20.14 |
|                   |           | 4             | 20.51                      | 20.40 | 20.49 | 20.13     | 20.02 | 20.11 |
|                   | HSUPA     | 1             | 20.75                      | 20.50 | 20.64 | 20.37     | 20.12 | 20.26 |
|                   |           | 2             | 20.72                      | 20.51 | 20.62 | 20.34     | 20.13 | 20.24 |
|                   |           | 3             | 20.71                      | 20.54 | 20.59 | 20.33     | 20.16 | 20.21 |
|                   |           | 4             | 20.69                      | 20.48 | 20.55 | 20.31     | 20.10 | 20.17 |
|                   |           | 5             | 20.65                      | 20.50 | 20.54 | 20.27     | 20.12 | 20.16 |
|                   | HSPA+     | 1             | 20.43                      | 20.47 | 20.48 | 20.05     | 20.09 | 20.10 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For PCS1900 / WCDMA Band2: Antenna Gain = -0.38dBi

Limit: EIRP ≤ 33dBm

**LTE Band 2**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 1.4                | QPSK       | RB1#0                 | 21.95                                   | 21.93 | 21.84 | 21.57     | 21.55 | 21.46 |
|                    |            | RB1#3                 | 22.10                                   | 22.08 | 22.03 | 21.72     | 21.70 | 21.65 |
|                    |            | RB1#5                 | 21.95                                   | 21.85 | 21.87 | 21.57     | 21.47 | 21.49 |
|                    |            | RB3#0                 | 22.06                                   | 22.04 | 21.92 | 21.68     | 21.66 | 21.54 |
|                    |            | RB3#3                 | 22.11                                   | 22.10 | 21.91 | 21.73     | 21.72 | 21.53 |
|                    |            | RB6#0                 | 20.99                                   | 20.99 | 20.93 | 20.61     | 20.61 | 20.55 |
|                    | 16QAM      | RB1#0                 | 21.08                                   | 20.92 | 20.81 | 20.70     | 20.54 | 20.43 |
|                    |            | RB1#3                 | 21.27                                   | 21.12 | 20.99 | 20.89     | 20.74 | 20.61 |
|                    |            | RB1#5                 | 21.07                                   | 20.97 | 20.80 | 20.69     | 20.59 | 20.42 |
|                    |            | RB3#0                 | 21.02                                   | 19.32 | 21.10 | 20.64     | 18.94 | 20.72 |
|                    |            | RB3#3                 | 21.09                                   | 17.91 | 21.09 | 20.71     | 17.53 | 20.71 |
|                    |            | RB6#0                 | 20.07                                   | 20.00 | 19.95 | 19.69     | 19.62 | 19.57 |
| 3.0                | QPSK       | RB1#0                 | 21.99                                   | 21.99 | 21.91 | 21.61     | 21.61 | 21.53 |
|                    |            | RB1#8                 | 21.97                                   | 21.99 | 21.94 | 21.59     | 21.61 | 21.56 |
|                    |            | RB1#14                | 21.92                                   | 21.92 | 21.92 | 21.54     | 21.54 | 21.54 |
|                    |            | RB6#0                 | 20.97                                   | 20.90 | 20.81 | 20.59     | 20.52 | 20.43 |
|                    |            | RB6#9                 | 20.90                                   | 20.91 | 20.88 | 20.52     | 20.53 | 20.50 |
|                    |            | RB15#0                | 21.00                                   | 20.98 | 20.91 | 20.62     | 20.60 | 20.53 |
|                    | 16QAM      | RB1#0                 | 21.59                                   | 21.17 | 20.92 | 21.21     | 20.79 | 20.54 |
|                    |            | RB1#8                 | 21.53                                   | 21.18 | 20.90 | 21.15     | 20.80 | 20.52 |
|                    |            | RB1#14                | 21.52                                   | 21.12 | 20.83 | 21.14     | 20.74 | 20.45 |
|                    |            | RB6#0                 | 20.11                                   | 20.01 | 19.82 | 19.73     | 19.63 | 19.44 |
|                    |            | RB6#9                 | 20.09                                   | 20.07 | 19.82 | 19.71     | 19.69 | 19.44 |
|                    |            | RB15#0                | 20.16                                   | 20.03 | 20.01 | 19.78     | 19.65 | 19.63 |



| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 21.90                                   | 21.94 | 21.78 | 21.52     | 21.56 | 21.4  |
|                    |            | RB1#13                | 22.03                                   | 22.04 | 21.92 | 21.65     | 21.66 | 21.54 |
|                    |            | RB1#24                | 21.87                                   | 21.87 | 21.77 | 21.49     | 21.49 | 21.39 |
|                    |            | RB15#0                | 21.02                                   | 20.98 | 20.89 | 20.64     | 20.60 | 20.51 |
|                    |            | RB15#10               | 21.02                                   | 21.05 | 20.99 | 20.64     | 20.67 | 20.61 |
|                    |            | RB25#0                | 20.96                                   | 20.99 | 20.87 | 20.58     | 20.61 | 20.49 |
|                    | 16QAM      | RB1#0                 | 20.81                                   | 21.24 | 20.88 | 20.43     | 20.86 | 20.50 |
|                    |            | RB1#13                | 20.90                                   | 21.33 | 20.97 | 20.52     | 20.95 | 20.59 |
|                    |            | RB1#24                | 20.79                                   | 21.19 | 20.83 | 20.41     | 20.81 | 20.45 |
|                    |            | RB15#0                | 20.13                                   | 20.03 | 19.99 | 19.75     | 19.65 | 19.61 |
|                    |            | RB15#10               | 20.14                                   | 20.11 | 20.06 | 19.76     | 19.73 | 19.68 |
|                    |            | RB25#0                | 20.09                                   | 20.10 | 19.97 | 19.71     | 19.72 | 19.59 |
| 10.0               | QPSK       | RB1#0                 | 21.94                                   | 21.97 | 21.85 | 21.56     | 21.59 | 21.47 |
|                    |            | RB1#25                | 22.08                                   | 22.10 | 22.02 | 21.70     | 21.72 | 21.64 |
|                    |            | RB1#49                | 21.90                                   | 21.87 | 21.92 | 21.52     | 21.49 | 21.54 |
|                    |            | RB25#0                | 20.99                                   | 20.97 | 20.91 | 20.61     | 20.59 | 20.53 |
|                    |            | RB25#25               | 20.94                                   | 21.00 | 20.97 | 20.56     | 20.62 | 20.59 |
|                    |            | RB50#0                | 20.98                                   | 20.97 | 20.90 | 20.60     | 20.59 | 20.52 |
|                    | 16QAM      | RB1#0                 | 21.55                                   | 21.12 | 20.84 | 21.17     | 20.74 | 20.46 |
|                    |            | RB1#25                | 21.66                                   | 21.26 | 20.77 | 21.28     | 20.88 | 20.39 |
|                    |            | RB1#49                | 21.45                                   | 21.06 | 20.68 | 21.07     | 20.68 | 20.30 |
|                    |            | RB25#0                | 20.18                                   | 20.08 | 19.75 | 19.80     | 19.70 | 19.37 |
|                    |            | RB25#25               | 20.10                                   | 20.13 | 19.88 | 19.72     | 19.75 | 19.50 |
|                    |            | RB50#0                | 20.05                                   | 20.05 | 20.07 | 19.67     | 19.67 | 19.69 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 15.0               | QPSK       | RB1#0                 | 21.84                                   | 21.90 | 21.80 | 21.46     | 21.52 | 21.42 |
|                    |            | RB1#37                | 21.92                                   | 21.99 | 21.45 | 21.54     | 21.61 | 21.07 |
|                    |            | RB1#74                | 21.79                                   | 21.79 | 21.32 | 21.41     | 21.41 | 20.94 |
|                    |            | RB36#0                | 21.07                                   | 20.95 | 20.46 | 20.69     | 20.57 | 20.08 |
|                    |            | RB36#18               | 20.97                                   | 20.99 | 20.45 | 20.59     | 20.61 | 20.07 |
|                    |            | RB36#37               | 20.99                                   | 20.99 | 20.51 | 20.61     | 20.61 | 20.13 |
|                    |            | RB75#0                | 21.45                                   | 21.09 | 20.73 | 21.07     | 20.71 | 20.35 |
|                    | 16QAM      | RB1#0                 | 21.49                                   | 21.05 | 20.79 | 21.11     | 20.67 | 20.41 |
|                    |            | RB1#37                | 21.48                                   | 20.88 | 20.63 | 21.10     | 20.50 | 20.25 |
|                    |            | RB1#74                | 20.09                                   | 19.98 | 19.47 | 19.71     | 19.60 | 19.09 |
|                    |            | RB36#0                | 20.00                                   | 20.06 | 19.51 | 19.62     | 19.68 | 19.13 |
|                    |            | RB36#18               | 20.07                                   | 20.08 | 19.53 | 19.69     | 19.70 | 19.15 |
|                    |            | RB36#37               | 21.84                                   | 21.90 | 21.80 | 21.46     | 21.52 | 21.42 |
|                    |            | RB75#0                | 21.92                                   | 21.99 | 21.45 | 21.54     | 21.61 | 21.07 |
| 20.0               | QPSK       | RB1#0                 | 21.28                                   | 21.23 | 21.04 | 20.90     | 20.85 | 20.66 |
|                    |            | RB1#49                | 21.67                                   | 21.65 | 21.46 | 21.29     | 21.27 | 21.08 |
|                    |            | RB1#99                | 21.19                                   | 21.09 | 21.04 | 20.81     | 20.71 | 20.66 |
|                    |            | RB50#0                | 20.55                                   | 20.46 | 20.57 | 20.17     | 20.08 | 20.19 |
|                    |            | RB50#24               | 20.45                                   | 20.45 | 20.45 | 20.07     | 20.07 | 20.07 |
|                    |            | RB50#49               | 20.53                                   | 20.45 | 20.51 | 20.15     | 20.07 | 20.13 |
|                    |            | RB100#0               | 20.61                                   | 20.57 | 20.65 | 20.23     | 20.19 | 20.27 |
|                    | 16QAM      | RB1#0                 | 20.94                                   | 20.89 | 21.08 | 20.56     | 20.51 | 20.70 |
|                    |            | RB1#49                | 20.60                                   | 20.33 | 20.61 | 20.22     | 19.95 | 20.23 |
|                    |            | RB1#99                | 19.58                                   | 19.45 | 19.69 | 19.20     | 19.07 | 19.31 |
|                    |            | RB50#0                | 19.48                                   | 19.56 | 19.57 | 21.46     | 21.52 | 21.42 |
|                    |            | RB50#24               | 19.63                                   | 19.51 | 19.61 | 21.54     | 21.61 | 21.07 |
|                    |            | RB50#49               | 21.28                                   | 21.23 | 21.04 | 21.41     | 21.41 | 20.94 |
|                    |            | RB100#0               | 21.67                                   | 21.65 | 21.46 | 20.69     | 20.57 | 20.08 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)  
 For Band2: Antenna Gain = -0.38dBi  
 Limit: EIRP ≤ 33dBm

**LTE Band 4**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 1.4                | QPSK       | RB1#0                 | 21.83                                   | 21.86 | 21.69 | 21.38     | 21.41 | 21.24 |
|                    |            | RB1#3                 | 21.97                                   | 22.01 | 21.99 | 21.52     | 21.56 | 21.54 |
|                    |            | RB1#5                 | 21.81                                   | 21.84 | 21.67 | 21.36     | 21.39 | 21.22 |
|                    |            | RB3#0                 | 21.95                                   | 21.94 | 21.88 | 21.50     | 21.49 | 21.43 |
|                    |            | RB3#3                 | 21.96                                   | 21.96 | 21.89 | 21.51     | 21.51 | 21.44 |
|                    |            | RB6#0                 | 20.92                                   | 20.92 | 20.82 | 20.47     | 20.47 | 20.37 |
|                    | 16QAM      | RB1#0                 | 20.91                                   | 21.03 | 20.82 | 20.46     | 20.58 | 20.37 |
|                    |            | RB1#3                 | 21.08                                   | 21.18 | 21.00 | 20.63     | 20.73 | 20.55 |
|                    |            | RB1#5                 | 20.92                                   | 21.00 | 20.85 | 20.47     | 20.55 | 20.40 |
|                    |            | RB3#0                 | 21.23                                   | 20.97 | 21.05 | 20.78     | 20.52 | 20.60 |
|                    |            | RB3#3                 | 21.24                                   | 21.01 | 21.02 | 20.79     | 20.56 | 20.57 |
|                    |            | RB6#0                 | 19.99                                   | 19.99 | 19.83 | 19.54     | 19.54 | 19.38 |
| 3.0                | QPSK       | RB1#0                 | 21.84                                   | 21.86 | 21.82 | 21.39     | 21.41 | 21.37 |
|                    |            | RB1#8                 | 21.87                                   | 21.91 | 21.84 | 21.42     | 21.46 | 21.39 |
|                    |            | RB1#14                | 21.83                                   | 21.82 | 21.75 | 21.38     | 21.37 | 21.30 |
|                    |            | RB6#0                 | 20.88                                   | 20.88 | 20.78 | 20.43     | 20.43 | 20.33 |
|                    |            | RB6#9                 | 20.90                                   | 20.81 | 20.77 | 20.45     | 20.36 | 20.32 |
|                    |            | RB15#0                | 20.95                                   | 20.96 | 20.88 | 20.50     | 20.51 | 20.43 |
|                    | 16QAM      | RB1#0                 | 21.59                                   | 21.13 | 20.98 | 21.14     | 20.68 | 20.53 |
|                    |            | RB1#8                 | 21.63                                   | 21.08 | 20.94 | 21.18     | 20.63 | 20.49 |
|                    |            | RB1#14                | 21.58                                   | 21.07 | 20.87 | 21.13     | 20.62 | 20.42 |
|                    |            | RB6#0                 | 19.98                                   | 19.92 | 19.81 | 19.53     | 19.47 | 19.36 |
|                    |            | RB6#9                 | 20.01                                   | 19.96 | 19.77 | 19.56     | 19.51 | 19.32 |
|                    |            | RB15#0                | 20.07                                   | 19.96 | 19.97 | 19.62     | 19.51 | 19.52 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 21.77                                   | 21.79 | 21.70 | 21.32     | 21.34 | 21.25 |
|                    |            | RB1#13                | 22.00                                   | 21.94 | 21.84 | 21.55     | 21.49 | 21.39 |
|                    |            | RB1#24                | 21.78                                   | 21.78 | 21.70 | 21.33     | 21.33 | 21.25 |
|                    |            | RB15#0                | 20.98                                   | 20.90 | 20.92 | 20.53     | 20.45 | 20.47 |
|                    |            | RB15#10               | 20.93                                   | 20.99 | 20.86 | 20.48     | 20.54 | 20.41 |
|                    |            | RB25#0                | 20.93                                   | 20.89 | 20.89 | 20.48     | 20.44 | 20.44 |
|                    | 16QAM      | RB1#0                 | 20.80                                   | 21.17 | 20.88 | 20.35     | 20.72 | 20.43 |
|                    |            | RB1#13                | 20.97                                   | 21.35 | 21.02 | 20.52     | 20.90 | 20.57 |
|                    |            | RB1#24                | 20.77                                   | 21.10 | 20.90 | 20.32     | 20.65 | 20.45 |
|                    |            | RB15#0                | 20.09                                   | 19.91 | 20.03 | 19.64     | 19.46 | 19.58 |
|                    |            | RB15#10               | 20.03                                   | 19.99 | 19.94 | 19.58     | 19.54 | 19.49 |
|                    |            | RB25#0                | 20.04                                   | 19.93 | 19.93 | 19.59     | 19.48 | 19.48 |
| 10.0               | QPSK       | RB1#0                 | 21.86                                   | 21.86 | 21.83 | 21.41     | 21.41 | 21.38 |
|                    |            | RB1#25                | 21.94                                   | 21.99 | 21.98 | 21.49     | 21.54 | 21.53 |
|                    |            | RB1#49                | 21.86                                   | 21.86 | 21.79 | 21.41     | 21.41 | 21.34 |
|                    |            | RB25#0                | 21.01                                   | 20.96 | 20.99 | 20.56     | 20.51 | 20.54 |
|                    |            | RB25#25               | 21.01                                   | 20.99 | 20.89 | 20.56     | 20.54 | 20.44 |
|                    |            | RB50#0                | 20.98                                   | 20.96 | 20.94 | 20.53     | 20.51 | 20.49 |
|                    | 16QAM      | RB1#0                 | 21.58                                   | 21.09 | 20.93 | 21.13     | 20.64 | 20.48 |
|                    |            | RB1#25                | 21.72                                   | 21.27 | 21.04 | 21.27     | 20.82 | 20.59 |
|                    |            | RB1#49                | 21.61                                   | 21.08 | 20.92 | 21.16     | 20.63 | 20.47 |
|                    |            | RB25#0                | 20.12                                   | 20.01 | 20.11 | 19.67     | 19.56 | 19.66 |
|                    |            | RB25#25               | 20.09                                   | 20.05 | 20.00 | 19.64     | 19.60 | 19.55 |
|                    |            | RB50#0                | 20.05                                   | 20.00 | 19.98 | 19.62     | 19.51 | 19.52 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 15.0               | QPSK       | RB1#0                 | 21.71                                   | 21.79 | 21.75 | 21.26     | 21.34 | 21.3  |
|                    |            | RB1#38                | 21.86                                   | 21.96 | 21.89 | 21.41     | 21.51 | 21.44 |
|                    |            | RB1#74                | 21.70                                   | 21.76 | 21.74 | 21.25     | 21.31 | 21.29 |
|                    |            | RB36#0                | 20.96                                   | 20.95 | 21.01 | 20.51     | 20.50 | 20.56 |
|                    |            | RB36#39               | 21.01                                   | 21.01 | 20.95 | 20.56     | 20.56 | 20.50 |
|                    |            | RB75#0                | 20.96                                   | 20.97 | 20.94 | 20.51     | 20.52 | 20.49 |
|                    | 16QAM      | RB1#0                 | 21.47                                   | 20.96 | 21.19 | 21.02     | 20.51 | 20.74 |
|                    |            | RB1#38                | 21.60                                   | 21.13 | 21.35 | 21.15     | 20.68 | 20.90 |
|                    |            | RB1#74                | 21.48                                   | 20.97 | 21.25 | 21.03     | 20.52 | 20.80 |
|                    |            | RB36#0                | 20.01                                   | 19.96 | 19.94 | 19.56     | 19.51 | 19.49 |
|                    |            | RB36#39               | 20.02                                   | 20.04 | 19.92 | 19.57     | 19.59 | 19.47 |
|                    |            | RB75#0                | 20.00                                   | 20.00 | 19.92 | 19.55     | 19.55 | 19.47 |
| 20.0               | QPSK       | RB1#0                 | 21.55                                   | 21.57 | 21.48 | 21.10     | 21.12 | 21.03 |
|                    |            | RB1#50                | 22.04                                   | 22.14 | 22.02 | 21.59     | 21.69 | 21.57 |
|                    |            | RB1#99                | 21.60                                   | 21.63 | 21.46 | 21.15     | 21.18 | 21.01 |
|                    |            | RB50#0                | 20.93                                   | 20.90 | 20.95 | 20.48     | 20.45 | 20.50 |
|                    |            | RB50#50               | 20.97                                   | 20.96 | 20.83 | 20.52     | 20.51 | 20.38 |
|                    |            | RB100#0               | 21.01                                   | 20.93 | 20.88 | 20.56     | 20.48 | 20.43 |
|                    | 16QAM      | RB1#0                 | 20.99                                   | 20.90 | 21.19 | 20.54     | 20.45 | 20.74 |
|                    |            | RB1#50                | 21.43                                   | 21.35 | 21.63 | 20.98     | 20.90 | 21.18 |
|                    |            | RB1#99                | 20.99                                   | 20.90 | 21.26 | 20.54     | 20.45 | 20.81 |
|                    |            | RB50#0                | 19.97                                   | 19.89 | 19.92 | 19.52     | 19.44 | 19.47 |
|                    |            | RB50#50               | 19.96                                   | 19.98 | 19.82 | 19.51     | 19.53 | 19.37 |
|                    |            | RB100#0               | 20.01                                   | 19.95 | 19.88 | 19.56     | 19.50 | 19.43 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band4: Antenna Gain = -0.45dBi

Limit: EIRP ≤ 30dBm

## LTE Band5

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low      | Mid   | High  |
| 1.4                | QPSK       | RB1#0                 | 22.20                                   | 22.22 | 22.15 | 19.60    | 19.62 | 19.55 |
|                    |            | RB1#3                 | 22.39                                   | 22.43 | 22.38 | 19.79    | 19.83 | 19.78 |
|                    |            | RB1#5                 | 22.19                                   | 22.24 | 22.23 | 19.59    | 19.64 | 19.63 |
|                    |            | RB3#0                 | 22.32                                   | 22.32 | 22.33 | 19.72    | 19.72 | 19.73 |
|                    |            | RB3#3                 | 22.30                                   | 22.30 | 22.36 | 19.70    | 19.70 | 19.76 |
|                    |            | RB6#0                 | 21.26                                   | 21.29 | 21.29 | 18.66    | 18.69 | 18.69 |
|                    | 16QAM      | RB1#0                 | 21.24                                   | 21.36 | 21.22 | 18.64    | 18.76 | 18.62 |
|                    |            | RB1#3                 | 21.41                                   | 21.56 | 21.42 | 18.81    | 18.96 | 18.82 |
|                    |            | RB1#5                 | 21.27                                   | 21.37 | 21.26 | 18.67    | 18.77 | 18.66 |
|                    |            | RB3#0                 | 21.50                                   | 21.29 | 21.42 | 18.90    | 18.69 | 18.82 |
|                    |            | RB3#3                 | 21.52                                   | 21.33 | 21.40 | 18.92    | 18.73 | 18.80 |
|                    |            | RB6#0                 | 20.27                                   | 20.32 | 20.24 | 17.67    | 17.72 | 17.64 |
| 3.0                | QPSK       | RB1#0                 | 22.23                                   | 22.30 | 22.26 | 19.63    | 19.70 | 19.66 |
|                    |            | RB1#8                 | 22.22                                   | 22.33 | 22.27 | 19.62    | 19.73 | 19.67 |
|                    |            | RB1#14                | 22.22                                   | 22.28 | 22.25 | 19.62    | 19.68 | 19.65 |
|                    |            | RB6#0                 | 21.21                                   | 21.26 | 21.21 | 18.61    | 18.66 | 18.61 |
|                    |            | RB6#9                 | 21.21                                   | 21.25 | 21.24 | 18.61    | 18.65 | 18.64 |
|                    |            | RB15#0                | 21.25                                   | 21.32 | 21.27 | 18.65    | 18.72 | 18.67 |
|                    | 16QAM      | RB1#0                 | 21.86                                   | 21.45 | 21.32 | 19.26    | 18.85 | 18.72 |
|                    |            | RB1#8                 | 21.82                                   | 21.41 | 21.28 | 19.22    | 18.81 | 18.68 |
|                    |            | RB1#14                | 21.79                                   | 21.45 | 21.26 | 19.19    | 18.85 | 18.66 |
|                    |            | RB6#0                 | 20.31                                   | 20.28 | 20.19 | 17.71    | 17.68 | 17.59 |
|                    |            | RB6#9                 | 20.27                                   | 20.33 | 20.19 | 17.67    | 17.73 | 17.59 |
|                    |            | RB15#0                | 20.33                                   | 20.29 | 20.35 | 17.73    | 17.69 | 17.75 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low      | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 22.17                                   | 22.22 | 22.20 | 19.57    | 19.62 | 19.6  |
|                    |            | RB1#13                | 22.35                                   | 22.34 | 22.32 | 19.75    | 19.74 | 19.72 |
|                    |            | RB1#24                | 22.20                                   | 22.21 | 22.19 | 19.60    | 19.61 | 19.59 |
|                    |            | RB15#0                | 21.32                                   | 21.29 | 21.35 | 18.72    | 18.69 | 18.75 |
|                    |            | RB15#10               | 21.32                                   | 21.35 | 21.30 | 18.72    | 18.75 | 18.70 |
|                    |            | RB25#0                | 21.27                                   | 21.32 | 21.29 | 18.67    | 18.72 | 18.69 |
|                    | 16QAM      | RB1#0                 | 21.12                                   | 21.51 | 21.27 | 18.52    | 18.91 | 18.67 |
|                    |            | RB1#13                | 21.22                                   | 21.61 | 21.41 | 18.62    | 19.01 | 18.81 |
|                    |            | RB1#24                | 21.12                                   | 21.50 | 21.29 | 18.52    | 18.90 | 18.69 |
|                    |            | RB15#0                | 20.36                                   | 20.31 | 20.38 | 17.76    | 17.71 | 17.78 |
|                    |            | RB15#10               | 20.33                                   | 20.35 | 20.35 | 17.73    | 17.75 | 17.75 |
|                    |            | RB25#0                | 20.34                                   | 20.33 | 20.36 | 17.74    | 17.73 | 17.76 |
| 10.0               | QPSK       | RB1#0                 | 22.24                                   | 22.33 | 22.28 | 19.64    | 19.73 | 19.68 |
|                    |            | RB1#25                | 22.39                                   | 22.41 | 22.44 | 19.79    | 19.81 | 19.84 |
|                    |            | RB1#49                | 22.25                                   | 22.29 | 22.24 | 19.65    | 19.69 | 19.64 |
|                    |            | RB25#0                | 21.27                                   | 21.35 | 21.42 | 18.67    | 18.75 | 18.82 |
|                    |            | RB25#25               | 21.36                                   | 21.35 | 21.30 | 18.76    | 18.75 | 18.70 |
|                    |            | RB50#0                | 21.34                                   | 21.32 | 21.36 | 18.74    | 18.72 | 18.76 |
|                    | 16QAM      | RB1#0                 | 21.88                                   | 21.42 | 21.29 | 19.28    | 18.82 | 18.69 |
|                    |            | RB1#25                | 21.99                                   | 21.55 | 21.36 | 19.39    | 18.95 | 18.76 |
|                    |            | RB1#49                | 21.85                                   | 21.44 | 21.29 | 19.25    | 18.84 | 18.69 |
|                    |            | RB25#0                | 20.35                                   | 20.36 | 20.53 | 17.75    | 17.76 | 17.93 |
|                    |            | RB25#25               | 20.44                                   | 20.37 | 20.41 | 17.84    | 17.77 | 17.81 |
|                    |            | RB50#0                | 20.35                                   | 20.34 | 20.41 | 17.75    | 17.74 | 17.81 |

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)  
 For Band5: Antenna Gain = -0.45dBi = -2.6dBd (0dBd=2.15dBi)  
 Limit: ERP ≤ 38.45dBm

**LTE Band 7**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power(dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                    | Mid   | High  | Low       | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 21.74                                  | 22.00 | 21.00 | 21.46     | 21.72 | 20.72 |
|                    |            | RB1#13                | 21.90                                  | 22.13 | 20.86 | 21.62     | 21.85 | 20.58 |
|                    |            | RB1#24                | 21.80                                  | 22.01 | 20.69 | 21.52     | 21.73 | 20.41 |
|                    |            | RB15#0                | 20.88                                  | 21.08 | 20.83 | 20.60     | 20.80 | 20.55 |
|                    |            | RB15#10               | 20.93                                  | 21.06 | 20.75 | 20.65     | 20.78 | 20.47 |
|                    |            | RB25#0                | 20.80                                  | 21.05 | 20.76 | 20.52     | 20.77 | 20.48 |
|                    | 16QAM      | RB1#0                 | 20.63                                  | 21.24 | 19.96 | 20.35     | 20.96 | 19.68 |
|                    |            | RB1#13                | 20.76                                  | 21.38 | 19.97 | 20.48     | 21.10 | 19.69 |
|                    |            | RB1#24                | 20.62                                  | 21.25 | 19.83 | 20.34     | 20.97 | 19.55 |
|                    |            | RB15#0                | 19.88                                  | 20.06 | 19.94 | 19.60     | 19.78 | 19.66 |
|                    |            | RB15#10               | 19.91                                  | 20.05 | 19.89 | 19.63     | 19.77 | 19.61 |
|                    |            | RB25#0                | 19.88                                  | 20.02 | 19.92 | 19.60     | 19.74 | 19.64 |
| 10.0               | QPSK       | RB1#0                 | 21.86                                  | 22.10 | 21.10 | 21.58     | 21.82 | 20.82 |
|                    |            | RB1#25                | 22.08                                  | 22.29 | 20.89 | 21.80     | 22.01 | 20.61 |
|                    |            | RB1#49                | 21.92                                  | 22.13 | 20.81 | 21.64     | 21.85 | 20.53 |
|                    |            | RB25#0                | 20.88                                  | 21.11 | 20.91 | 20.60     | 20.83 | 20.63 |
|                    |            | RB25#25               | 20.89                                  | 21.11 | 20.82 | 20.61     | 20.83 | 20.54 |
|                    |            | RB50#0                | 20.94                                  | 21.13 | 20.85 | 20.66     | 20.85 | 20.57 |
|                    | 16QAM      | RB1#0                 | 21.33                                  | 21.22 | 19.98 | 21.05     | 20.94 | 19.70 |
|                    |            | RB1#25                | 21.53                                  | 21.32 | 19.94 | 21.25     | 21.04 | 19.66 |
|                    |            | RB1#49                | 21.37                                  | 21.24 | 19.90 | 21.09     | 20.96 | 19.62 |
|                    |            | RB25#0                | 19.93                                  | 20.19 | 20.12 | 19.65     | 19.91 | 19.84 |
|                    |            | RB25#25               | 20.00                                  | 20.13 | 20.05 | 19.72     | 19.85 | 19.77 |
|                    |            | RB50#0                | 19.93                                  | 20.14 | 20.02 | 19.65     | 19.86 | 19.74 |



| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power(dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                    | Mid   | High  | Low       | Mid   | High  |
| 15.0               | QPSK       | RB1#0                 | 21.77                                  | 21.97 | 21.27 | 21.49     | 21.69 | 20.99 |
|                    |            | RB1#38                | 21.93                                  | 22.17 | 20.94 | 21.65     | 21.89 | 20.66 |
|                    |            | RB1#74                | 21.85                                  | 22.07 | 20.91 | 21.57     | 21.79 | 20.63 |
|                    |            | RB36#0                | 21.03                                  | 21.23 | 21.03 | 20.75     | 20.95 | 20.75 |
|                    |            | RB36#39               | 21.05                                  | 21.23 | 20.93 | 20.77     | 20.95 | 20.65 |
|                    |            | RB75#0                | 21.03                                  | 21.26 | 20.93 | 20.75     | 20.98 | 20.65 |
|                    | 16QAM      | RB1#0                 | 21.24                                  | 21.11 | 20.55 | 20.96     | 20.83 | 20.27 |
|                    |            | RB1#38                | 21.43                                  | 21.24 | 20.37 | 21.15     | 20.96 | 20.09 |
|                    |            | RB1#74                | 21.38                                  | 21.15 | 20.37 | 21.10     | 20.87 | 20.09 |
|                    |            | RB36#0                | 19.92                                  | 20.16 | 20.12 | 19.64     | 19.88 | 19.84 |
|                    |            | RB36#39               | 19.98                                  | 20.13 | 20.04 | 19.70     | 19.85 | 19.76 |
|                    |            | RB75#0                | 20.01                                  | 20.17 | 20.07 | 19.73     | 19.89 | 19.79 |
| 20.0               | QPSK       | RB1#0                 | 21.61                                  | 21.79 | 21.43 | 21.33     | 21.51 | 21.15 |
|                    |            | RB1#50                | 22.14                                  | 22.31 | 20.99 | 21.86     | 22.03 | 20.71 |
|                    |            | RB1#99                | 21.73                                  | 21.91 | 20.74 | 21.45     | 21.63 | 20.46 |
|                    |            | RB50#0                | 20.93                                  | 21.05 | 21.15 | 20.65     | 20.77 | 20.87 |
|                    |            | RB50#50               | 20.98                                  | 21.04 | 20.92 | 20.70     | 20.76 | 20.64 |
|                    |            | RB100#0               | 20.91                                  | 21.06 | 21.01 | 20.63     | 20.78 | 20.73 |
|                    | 16QAM      | RB1#0                 | 20.91                                  | 21.02 | 20.91 | 20.63     | 20.74 | 20.63 |
|                    |            | RB1#50                | 21.40                                  | 21.45 | 20.60 | 21.12     | 21.17 | 20.32 |
|                    |            | RB1#99                | 21.03                                  | 21.08 | 20.40 | 20.75     | 20.80 | 20.12 |
|                    |            | RB50#0                | 19.91                                  | 20.08 | 20.24 | 19.63     | 19.80 | 19.96 |
|                    |            | RB50#50               | 19.95                                  | 20.05 | 20.06 | 19.67     | 19.77 | 19.78 |
|                    |            | RB100#0               | 19.93                                  | 20.06 | 20.17 | 19.65     | 19.78 | 19.89 |

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band7: Antenna Gain = -0.28dBi

Limit: ERP ≤ 33dBm

**LTE Band 17**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low      | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 22.26                                   | 22.24 | 22.14 | 19.44    | 19.42 | 19.32 |
|                    |            | RB1#13                | 22.37                                   | 22.34 | 22.30 | 19.55    | 19.52 | 19.48 |
|                    |            | RB1#24                | 22.21                                   | 22.21 | 22.18 | 19.39    | 19.39 | 19.36 |
|                    |            | RB15#0                | 21.39                                   | 21.26 | 21.33 | 18.57    | 18.44 | 18.51 |
|                    |            | RB15#10               | 21.39                                   | 21.31 | 21.29 | 18.57    | 18.49 | 18.47 |
|                    |            | RB25#0                | 21.37                                   | 21.27 | 21.25 | 18.55    | 18.45 | 18.43 |
|                    | 16QAM      | RB1#0                 | 21.18                                   | 21.53 | 21.27 | 18.36    | 18.71 | 18.45 |
|                    |            | RB1#13                | 21.31                                   | 21.69 | 21.41 | 18.49    | 18.87 | 18.59 |
|                    |            | RB1#24                | 21.15                                   | 21.50 | 21.28 | 18.33    | 18.68 | 18.46 |
|                    |            | RB15#0                | 20.54                                   | 20.34 | 20.44 | 17.72    | 17.52 | 17.62 |
|                    |            | RB15#10               | 20.53                                   | 20.37 | 20.37 | 17.71    | 17.55 | 17.55 |
|                    |            | RB25#0                | 20.53                                   | 20.35 | 20.35 | 17.71    | 17.53 | 17.53 |
| 10.0               | QPSK       | RB1#0                 | 22.28                                   | 22.34 | 22.31 | 19.46    | 19.52 | 19.49 |
|                    |            | RB1#25                | 22.40                                   | 22.41 | 22.41 | 19.58    | 19.59 | 19.59 |
|                    |            | RB1#49                | 22.28                                   | 22.28 | 22.30 | 19.46    | 19.46 | 19.48 |
|                    |            | RB25#0                | 21.38                                   | 21.29 | 21.29 | 18.56    | 18.47 | 18.47 |
|                    |            | RB25#25               | 21.35                                   | 21.30 | 21.29 | 18.53    | 18.48 | 18.47 |
|                    |            | RB50#0                | 21.37                                   | 21.27 | 21.29 | 18.55    | 18.45 | 18.47 |
|                    | 16QAM      | RB1#0                 | 21.95                                   | 21.49 | 21.35 | 19.13    | 18.67 | 18.53 |
|                    |            | RB1#25                | 22.08                                   | 21.57 | 21.40 | 19.26    | 18.75 | 18.58 |
|                    |            | RB1#49                | 21.90                                   | 21.42 | 21.31 | 19.08    | 18.60 | 18.49 |
|                    |            | RB25#0                | 20.55                                   | 20.40 | 20.46 | 17.73    | 17.58 | 17.64 |
|                    |            | RB25#25               | 20.50                                   | 20.45 | 20.48 | 17.68    | 17.63 | 17.66 |
|                    |            | RB50#0                | 20.45                                   | 20.38 | 20.39 | 17.63    | 17.56 | 17.57 |

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)  
 For Band17: Antenna Gain = -0.67dBi = -2.82dBd (0dBd=2.15dBi)  
 Limit: ERP≤34.77dBm

**LTE Band 38**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 23.00                                   | 23.09 | 22.68 | 22.68     | 22.77 | 22.36 |
|                    |            | RB1#13                | 23.10                                   | 23.19 | 22.65 | 22.78     | 22.87 | 22.33 |
|                    |            | RB1#24                | 23.00                                   | 23.11 | 22.56 | 22.68     | 22.79 | 22.24 |
|                    |            | RB15#0                | 22.07                                   | 22.07 | 22.08 | 21.75     | 21.75 | 21.76 |
|                    |            | RB15#10               | 22.06                                   | 22.07 | 22.08 | 21.74     | 21.75 | 21.76 |
|                    |            | RB25#0                | 22.11                                   | 22.09 | 22.06 | 21.79     | 21.77 | 21.74 |
|                    | 16QAM      | RB1#0                 | 22.20                                   | 21.99 | 21.73 | 21.88     | 21.67 | 21.41 |
|                    |            | RB1#13                | 22.28                                   | 22.14 | 21.76 | 21.96     | 21.82 | 21.44 |
|                    |            | RB1#24                | 22.23                                   | 22.04 | 21.68 | 21.91     | 21.72 | 21.36 |
|                    |            | RB15#0                | 21.11                                   | 21.09 | 21.15 | 20.79     | 20.77 | 20.83 |
|                    |            | RB15#10               | 21.11                                   | 21.07 | 21.12 | 20.79     | 20.75 | 20.80 |
|                    |            | RB25#0                | 21.08                                   | 21.16 | 21.13 | 20.76     | 20.84 | 20.81 |
| 10.0               | QPSK       | RB1#0                 | 23.03                                   | 23.19 | 22.95 | 22.71     | 22.87 | 22.63 |
|                    |            | RB1#25                | 23.34                                   | 23.39 | 22.73 | 23.02     | 23.07 | 22.41 |
|                    |            | RB1#49                | 23.00                                   | 23.23 | 22.81 | 22.68     | 22.91 | 22.49 |
|                    |            | RB25#0                | 22.13                                   | 22.21 | 22.19 | 21.81     | 21.89 | 21.87 |
|                    |            | RB25#25               | 22.12                                   | 22.21 | 22.16 | 21.80     | 21.89 | 21.84 |
|                    |            | RB50#0                | 22.13                                   | 22.23 | 22.15 | 21.81     | 21.91 | 21.83 |
|                    | 16QAM      | RB1#0                 | 22.20                                   | 22.01 | 22.05 | 21.88     | 21.69 | 21.73 |
|                    |            | RB1#25                | 22.50                                   | 22.34 | 21.87 | 22.18     | 22.02 | 21.55 |
|                    |            | RB1#49                | 22.23                                   | 22.10 | 21.96 | 21.91     | 21.78 | 21.64 |
|                    |            | RB25#0                | 21.16                                   | 21.26 | 21.26 | 20.84     | 20.94 | 20.94 |
|                    |            | RB25#25               | 21.15                                   | 21.28 | 21.21 | 20.83     | 20.96 | 20.89 |
|                    |            | RB50#0                | 21.14                                   | 21.26 | 21.19 | 20.82     | 20.94 | 20.87 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 15.0               | QPSK       | RB1#0                 | 22.96                                   | 23.06 | 23.17 | 22.64     | 22.74 | 22.85 |
|                    |            | RB1#38                | 23.08                                   | 23.26 | 22.97 | 22.76     | 22.94 | 22.65 |
|                    |            | RB1#74                | 23.05                                   | 23.13 | 23.06 | 22.73     | 22.81 | 22.74 |
|                    |            | RB36#0                | 22.15                                   | 22.25 | 22.29 | 21.83     | 21.93 | 21.97 |
|                    |            | RB36#39               | 22.16                                   | 22.26 | 22.26 | 21.84     | 21.94 | 21.94 |
|                    |            | RB75#0                | 22.20                                   | 22.30 | 22.25 | 21.88     | 21.98 | 21.93 |
|                    | 16QAM      | RB1#0                 | 22.11                                   | 21.99 | 22.33 | 21.79     | 21.67 | 22.01 |
|                    |            | RB1#38                | 22.25                                   | 22.12 | 22.21 | 21.93     | 21.80 | 21.89 |
|                    |            | RB1#74                | 22.26                                   | 22.01 | 22.25 | 21.94     | 21.69 | 21.93 |
|                    |            | RB36#0                | 21.07                                   | 21.15 | 21.32 | 20.75     | 20.83 | 21.00 |
|                    |            | RB36#39               | 21.12                                   | 21.18 | 21.25 | 20.80     | 20.86 | 20.93 |
|                    |            | RB75#0                | 21.09                                   | 21.25 | 21.23 | 20.77     | 20.93 | 20.91 |
| 20.0               | QPSK       | RB1#0                 | 22.82                                   | 22.86 | 23.00 | 22.50     | 22.54 | 22.68 |
|                    |            | RB1#50                | 23.35                                   | 23.45 | 23.10 | 23.03     | 23.13 | 22.78 |
|                    |            | RB1#99                | 22.93                                   | 22.94 | 22.93 | 22.61     | 22.62 | 22.61 |
|                    |            | RB50#0                | 22.10                                   | 22.18 | 22.22 | 21.78     | 21.86 | 21.90 |
|                    |            | RB50#50               | 22.15                                   | 22.17 | 22.11 | 21.83     | 21.85 | 21.79 |
|                    |            | RB100#0               | 22.12                                   | 22.19 | 22.16 | 21.8      | 21.87 | 21.84 |
|                    | 16QAM      | RB1#0                 | 21.89                                   | 21.84 | 22.20 | 21.57     | 21.52 | 21.88 |
|                    |            | RB1#50                | 22.37                                   | 22.42 | 22.37 | 22.05     | 22.10 | 22.05 |
|                    |            | RB1#99                | 21.96                                   | 21.89 | 22.17 | 21.64     | 21.57 | 21.85 |
|                    |            | RB50#0                | 21.10                                   | 21.27 | 21.25 | 20.78     | 20.95 | 20.93 |
|                    |            | RB50#50               | 21.18                                   | 21.23 | 21.03 | 20.86     | 20.91 | 20.71 |
|                    |            | RB100#0               | 21.12                                   | 21.21 | 21.11 | 20.8      | 20.89 | 20.79 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band38: Antenna Gain = -0.32dBi

Limit: EIRP ≤ 33dBm

**LTE Band 41**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 22.76                                   | 22.91 | 22.76 | 22.44     | 22.59 | 22.44 |
|                    |            | RB1#13                | 22.89                                   | 23.00 | 22.82 | 22.57     | 22.68 | 22.50 |
|                    |            | RB1#24                | 22.80                                   | 22.86 | 22.72 | 22.48     | 22.54 | 22.40 |
|                    |            | RB15#0                | 21.86                                   | 21.95 | 21.79 | 21.54     | 21.63 | 21.47 |
|                    |            | RB15#10               | 21.85                                   | 21.92 | 21.80 | 21.53     | 21.60 | 21.48 |
|                    |            | RB25#0                | 21.85                                   | 21.92 | 21.81 | 21.53     | 21.60 | 21.49 |
|                    | 16QAM      | RB1#0                 | 21.82                                   | 22.16 | 21.76 | 21.50     | 21.84 | 21.44 |
|                    |            | RB1#13                | 21.96                                   | 22.24 | 21.87 | 21.64     | 21.92 | 21.55 |
|                    |            | RB1#24                | 21.86                                   | 22.13 | 21.75 | 21.54     | 21.81 | 21.43 |
|                    |            | RB15#0                | 20.96                                   | 21.09 | 20.85 | 20.64     | 20.77 | 20.53 |
|                    |            | RB15#10               | 20.96                                   | 21.07 | 20.83 | 20.64     | 20.75 | 20.51 |
|                    |            | RB25#0                | 20.98                                   | 21.00 | 20.90 | 20.66     | 20.68 | 20.58 |
| 10.0               | QPSK       | RB1#0                 | 22.81                                   | 23.01 | 22.90 | 22.49     | 22.69 | 22.58 |
|                    |            | RB1#25                | 23.20                                   | 23.29 | 23.16 | 22.88     | 22.97 | 22.84 |
|                    |            | RB1#49                | 22.92                                   | 23.01 | 22.82 | 22.60     | 22.69 | 22.50 |
|                    |            | RB25#0                | 21.91                                   | 22.06 | 21.90 | 21.59     | 21.74 | 21.58 |
|                    |            | RB25#25               | 21.92                                   | 22.02 | 21.87 | 21.60     | 21.70 | 21.55 |
|                    |            | RB50#0                | 21.96                                   | 22.01 | 21.93 | 21.64     | 21.69 | 21.61 |
|                    | 16QAM      | RB1#0                 | 22.11                                   | 21.90 | 21.99 | 21.79     | 21.58 | 21.67 |
|                    |            | RB1#25                | 22.43                                   | 22.25 | 22.24 | 22.11     | 21.93 | 21.92 |
|                    |            | RB1#49                | 22.15                                   | 21.88 | 21.92 | 21.83     | 21.56 | 21.60 |
|                    |            | RB25#0                | 21.01                                   | 21.16 | 21.01 | 20.69     | 20.84 | 20.69 |
|                    |            | RB25#25               | 21.03                                   | 21.14 | 20.96 | 20.71     | 20.82 | 20.64 |
|                    |            | RB50#0                | 21.00                                   | 21.10 | 21.03 | 20.68     | 20.78 | 20.71 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 15.0               | QPSK       | RB1#0                 | 22.78                                   | 22.94 | 22.82 | 22.46     | 22.62 | 22.50 |
|                    |            | RB1#38                | 22.97                                   | 23.12 | 22.93 | 22.65     | 22.80 | 22.61 |
|                    |            | RB1#74                | 22.90                                   | 22.90 | 22.77 | 22.58     | 22.58 | 22.45 |
|                    |            | RB36#0                | 21.97                                   | 22.06 | 21.90 | 21.65     | 21.74 | 21.58 |
|                    |            | RB36#39               | 21.99                                   | 22.00 | 21.83 | 21.67     | 21.68 | 21.51 |
|                    |            | RB75#0                | 21.98                                   | 22.07 | 21.93 | 21.66     | 21.75 | 21.61 |
|                    | 16QAM      | RB1#0                 | 22.00                                   | 21.87 | 22.00 | 21.68     | 21.55 | 21.68 |
|                    |            | RB1#38                | 22.21                                   | 22.05 | 22.13 | 21.89     | 21.73 | 21.81 |
|                    |            | RB1#74                | 22.12                                   | 21.90 | 21.95 | 21.80     | 21.58 | 21.63 |
|                    |            | RB36#0                | 20.97                                   | 21.06 | 21.00 | 20.65     | 20.74 | 20.68 |
|                    |            | RB36#39               | 21.04                                   | 21.02 | 20.96 | 20.72     | 20.70 | 20.64 |
|                    |            | RB75#0                | 20.99                                   | 21.09 | 20.98 | 20.67     | 20.77 | 20.66 |
| 20.0               | QPSK       | RB1#0                 | 22.63                                   | 22.73 | 22.73 | 22.31     | 22.41 | 22.41 |
|                    |            | RB1#50                | 23.23                                   | 23.26 | 23.26 | 22.91     | 22.94 | 22.94 |
|                    |            | RB1#99                | 22.72                                   | 22.70 | 22.64 | 22.40     | 22.38 | 22.32 |
|                    |            | RB50#0                | 22.01                                   | 22.04 | 21.89 | 21.69     | 21.72 | 21.57 |
|                    |            | RB50#50               | 22.00                                   | 21.96 | 21.86 | 21.68     | 21.64 | 21.54 |
|                    |            | RB100#0               | 22.02                                   | 22.02 | 21.86 | 21.70     | 21.70 | 21.54 |
|                    | 16QAM      | RB1#0                 | 21.74                                   | 21.75 | 21.96 | 21.42     | 21.43 | 21.64 |
|                    |            | RB1#50                | 22.32                                   | 22.28 | 22.46 | 22.00     | 21.96 | 22.14 |
|                    |            | RB1#99                | 21.82                                   | 21.75 | 21.89 | 21.50     | 21.43 | 21.57 |
|                    |            | RB50#0                | 21.04                                   | 21.17 | 21.01 | 20.72     | 20.85 | 20.69 |
|                    |            | RB50#50               | 21.08                                   | 21.13 | 20.96 | 20.76     | 20.81 | 20.64 |
|                    |            | RB100#0               | 21.06                                   | 21.12 | 20.97 | 20.74     | 20.80 | 20.65 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band41: Antenna Gain = -0.32dBi

Limit: EIRP ≤ 33dBm

**Peak-to-average ratio (PAR)****Cellular Band**

| Mode | Channel | PAR (dB) | Limit(dB) |
|------|---------|----------|-----------|
| GSM  | Low     | 3.48     | 13        |
|      | Middle  | 3.42     | 13        |
|      | High    | 3.51     | 13        |

| Mode  | Channel | PAR (dB) | Limit(dB) |
|-------|---------|----------|-----------|
| EGPRS | Low     | 3.55     | 13        |
|       | Middle  | 3.71     | 13        |
|       | High    | 3.76     | 13        |

| Mode  | Channel | PAR (dB) | Limit (dB) |
|-------|---------|----------|------------|
| RMC   | Low     | 3.52     | 13         |
|       | Middle  | 3.72     | 13         |
|       | High    | 3.43     | 13         |
| HSDPA | Low     | 3.51     | 13         |
|       | Middle  | 3.57     | 13         |
|       | High    | 3.62     | 13         |
| HSUPA | Low     | 3.44     | 13         |
|       | Middle  | 3.45     | 13         |
|       | High    | 3.58     | 13         |
| HSPA+ | Low     | 3.42     | 13         |
|       | Middle  | 3.54     | 13         |
|       | High    | 3.53     | 13         |

**PCS Band**

| Mode | Channel | PAR (dB) | Limit(dB) |
|------|---------|----------|-----------|
| GSM  | Low     | 3.52     | 13        |
|      | Middle  | 3.57     | 13        |
|      | High    | 3.49     | 13        |

| Mode  | Channel | PAR (dB) | Limit(dB) |
|-------|---------|----------|-----------|
| EGPRS | Low     | 3.52     | 13        |
|       | Middle  | 3.57     | 13        |
|       | High    | 3.53     | 13        |

| Mode  | Channel | PAR (dB) | Limit (dB) |
|-------|---------|----------|------------|
| RMC   | Low     | 3.47     | 13         |
|       | Middle  | 3.57     | 13         |
|       | High    | 3.53     | 13         |
| HSDPA | Low     | 3.57     | 13         |
|       | Middle  | 3.56     | 13         |
|       | High    | 3.48     | 13         |
| HSUPA | Low     | 3.46     | 13         |
|       | Middle  | 3.45     | 13         |
|       | High    | 3.51     | 13         |
| HSPA+ | Low     | 3.40     | 13         |
|       | Middle  | 3.53     | 13         |
|       | High    | 3.49     | 13         |

**LTE Band 2 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 8.60             | 8.60                | 8.64              | 13             | Pass   |
| QPSK (100RB Size)  | 8.64             | 8.49                | 8.58              | 13             | Pass   |
| 16QAM (1RB Size)   | 8.43             | 8.41                | 8.60              | 13             | Pass   |
| 16QAM (100RB Size) | 8.67             | 8.35                | 8.43              | 13             | Pass   |

**LTE Band 4 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 8.64             | 8.55                | 8.46              | 13             | Pass   |
| QPSK (100RB Size)  | 8.58             | 8.46                | 8.60              | 13             | Pass   |
| 16QAM (1RB Size)   | 8.55             | 8.64                | 8.49              | 13             | Pass   |
| 16QAM (100RB Size) | 8.64             | 8.41                | 8.69              | 13             | Pass   |



**LTE Band 5 10MHz Bandwidth**

| Modulation        | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|-------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)   | 8.75             | 8.55                | 8.43              | 13             | Pass   |
| QPSK (50RB Size)  | 8.43             | 8.49                | 8.49              | 13             | Pass   |
| 16QAM (1RB Size)  | 8.52             | 8.60                | 8.55              | 13             | Pass   |
| 16QAM (50RB Size) | 8.49             | 8.55                | 8.60              | 13             | Pass   |

**LTE Band 7 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 8.41             | 8.67                | 8.60              | 13             | Pass   |
| QPSK (100RB Size)  | 8.60             | 8.58                | 8.64              | 13             | Pass   |
| 16QAM (1RB Size)   | 8.67             | 8.64                | 8.55              | 13             | Pass   |
| 16QAM (100RB Size) | 8.58             | 8.58                | 8.58              | 13             | Pass   |

**LTE Band 17 10MHz Bandwidth**

| Modulation        | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|-------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)   | 8.55             | 8.69                | 8.60              | 13             | Pass   |
| QPSK (50RB Size)  | 8.35             | 8.58                | 8.69              | 13             | Pass   |
| 16QAM (1RB Size)  | 8.55             | 8.60                | 8.64              | 13             | Pass   |
| 16QAM (50RB Size) | 8.52             | 8.64                | 8.58              | 13             | Pass   |

**LTE Band 38 20MHz Bandwidth**

| <b>Modulation</b>     | <b>Low channel<br/>(dB)</b> | <b>Middle channel<br/>(dB)</b> | <b>High channel<br/>(dB)</b> | <b>PAR<br/>Limit<br/>(dB)</b> | <b>Result</b> |
|-----------------------|-----------------------------|--------------------------------|------------------------------|-------------------------------|---------------|
| QPSK<br>(1RB Size)    | 9.00                        | 8.88                           | 8.26                         | 13                            | Pass          |
| QPSK<br>(100RB Size)  | 6.55                        | 7.13                           | 8.12                         | 13                            | Pass          |
| 16QAM<br>(1RB Size)   | 8.62                        | 7.25                           | 7.87                         | 13                            | Pass          |
| 16QAM<br>(100RB Size) | 8.10                        | 8.35                           | 9.44                         | 13                            | Pass          |

**LTE Band 41 20MHz Bandwidth**

| <b>Modulation</b>     | <b>Low channel<br/>(dB)</b> | <b>Middle channel<br/>(dB)</b> | <b>High channel<br/>(dB)</b> | <b>PAR<br/>Limit<br/>(dB)</b> | <b>Result</b> |
|-----------------------|-----------------------------|--------------------------------|------------------------------|-------------------------------|---------------|
| QPSK<br>(1RB Size)    | 8.58                        | 8.64                           | 8.60                         | 13                            | Pass          |
| QPSK<br>(100RB Size)  | 8.67                        | 8.41                           | 8.52                         | 13                            | Pass          |
| 16QAM<br>(1RB Size)   | 8.60                        | 8.72                           | 8.55                         | 13                            | Pass          |
| 16QAM<br>(100RB Size) | 8.64                        | 8.49                           | 8.58                         | 13                            | Pass          |

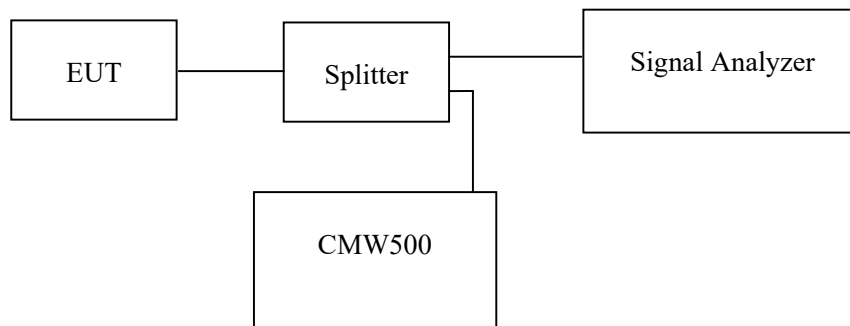
**FCC §2.1049, §22.917, §22.905 & §24.238&§27.53- OCCUPIED BANDWIDTH****Applicable Standard**

FCC 47 §2.1049, §22.917, §22.905, §24.238,§27.53.

**Test Procedure**

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.

**Test Data****Environmental Conditions**

|                    |          |
|--------------------|----------|
| Temperature:       | 27.6℃    |
| Relative Humidity: | 58 %     |
| ATM Pressure:      | 101.0kPa |

*The testing was performed by Black Ding from 2021-10-27 to 2021-11-28.*

*EUT operation mode: Transmitting*

**Test Result: Pass**

**Cellular Band (Part 22H)**

| Mode        | Channel | Frequency (MHz) | 99% Occupied Bandwidth (kHz) | 26 dB Emission Bandwidth (kHz) |
|-------------|---------|-----------------|------------------------------|--------------------------------|
| GSM (GMSK)  | 128     | 824.2           | 244.57                       | 318.40                         |
|             | 190     | 836.6           | 243.13                       | 319.80                         |
|             | 251     | 848.8           | 243.13                       | 319.80                         |
| EGPRS(8PSK) | 128     | 824.2           | 241.52                       | 319.40                         |
|             | 190     | 836.6           | 251.81                       | 322.70                         |
|             | 251     | 848.8           | 250.36                       | 322.70                         |

|       | Frequency (MHz) | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) |
|-------|-----------------|--------------------------|----------------------|
| RMC   | 826.4           | 4.17                     | 4.72                 |
|       | 836.6           | 4.17                     | 4.70                 |
|       | 846.6           | 4.15                     | 4.73                 |
| HSDPA | 826.4           | 4.20                     | 4.83                 |
|       | 836.6           | 4.17                     | 4.72                 |
|       | 846.6           | 4.21                     | 4.94                 |
| HSUPA | 826.4           | 4.18                     | 4.94                 |
|       | 836.6           | 4.17                     | 4.70                 |
|       | 846.6           | 4.21                     | 5.34                 |

**PCS Band (Part 24E)**

| Mode        | Channel | Frequency (MHz) | 99% Occupied Bandwidth (kHz) | 26 dB Emission Bandwidth (kHz) |
|-------------|---------|-----------------|------------------------------|--------------------------------|
| GSM (GMSK)  | 512     | 1850.2          | 244.57                       | 321.30                         |
|             | 661     | 1880.0          | 244.57                       | 321.30                         |
|             | 810     | 1909.8          | 243.13                       | 319.80                         |
| EGPRS(8PSK) | 512     | 1850.2          | 251.81                       | 322.70                         |
|             | 661     | 1880.0          | 251.81                       | 322.70                         |
|             | 810     | 1909.8          | 250.36                       | 322.70                         |

| Frequency (MHz) |        | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) |
|-----------------|--------|--------------------------|----------------------|
| RMC             | 1852.4 | 4.20                     | 4.89                 |
|                 | 1880.0 | 4.18                     | 4.94                 |
|                 | 1907.6 | 4.17                     | 4.70                 |
| HSDPA           | 1852.4 | 4.18                     | 4.94                 |
|                 | 1880.0 | 4.18                     | 4.75                 |
|                 | 1907.6 | 4.18                     | 4.70                 |
| HSUPA           | 1852.4 | 4.20                     | 4.81                 |
|                 | 1880.0 | 4.17                     | 4.70                 |
|                 | 1907.6 | 4.17                     | 4.70                 |

**LTE Mode:****LTE Band 2:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 1.4 MHz   | QPSK       | 1.096       | 1.296          | 1.102          | 1.326          | 1.102        | 1.290          |
|           | 16QAM      | 1.096       | 1.320          | 1.090          | 1.290          | 1.096        | 1.296          |
| 3 MHz     | QPSK       | 2.683       | 2.880          | 2.695          | 2.880          | 2.683        | 2.892          |
|           | 16QAM      | 2.683       | 2.892          | 2.683          | 2.880          | 2.683        | 2.880          |
| 5 MHz     | QPSK       | 4.511       | 4.960          | 4.511          | 4.980          | 4.491        | 4.940          |
|           | 16QAM      | 4.491       | 4.940          | 4.531          | 5.840          | 4.491        | 4.980          |
| 10 MHz    | QPSK       | 8.942       | 9.680          | 8.942          | 9.600          | 8.942        | 9.600          |
|           | 16QAM      | 8.942       | 9.560          | 8.942          | 9.560          | 8.942        | 9.680          |
| 15 MHz    | QPSK       | 13.533      | 14.820         | 13.473         | 14.640         | 13.473       | 14.640         |
|           | 16QAM      | 13.473      | 14.640         | 13.533         | 14.700         | 13.473       | 14.640         |
| 20 MHz    | QPSK       | 17.964      | 19.200         | 17.964         | 19.280         | 17.964       | 19.520         |
|           | 16QAM      | 17.964      | 19.360         | 17.964         | 19.280         | 17.964       | 19.280         |

**LTE Band 4:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 1.4 MHz   | QPSK       | 1.096       | 1.302          | 1.096          | 1.320          | 1.102        | 1.290          |
|           | 16QAM      | 1.108       | 1.326          | 1.090          | 1.290          | 1.102        | 1.302          |
| 3 MHz     | QPSK       | 2.683       | 2.880          | 2.683          | 2.880          | 2.683        | 2.892          |
|           | 16QAM      | 2.683       | 2.916          | 2.683          | 2.880          | 2.683        | 2.880          |
| 5 MHz     | QPSK       | 4.511       | 5.060          | 4.511          | 4.940          | 4.511        | 5.400          |
|           | 16QAM      | 4.491       | 4.940          | 4.511          | 5.140          | 4.551        | 5.400          |
| 10 MHz    | QPSK       | 8.942       | 9.680          | 8.942          | 9.720          | 8.942        | 9.840          |
|           | 16QAM      | 8.942       | 9.560          | 8.942          | 9.600          | 8.942        | 9.640          |
| 15 MHz    | QPSK       | 13.533      | 14.760         | 13.413         | 14.640         | 13.533       | 14.880         |
|           | 16QAM      | 13.533      | 14.700         | 13.533         | 15.060         | 13.533       | 14.880         |
| 20 MHz    | QPSK       | 17.884      | 19.200         | 17.884         | 19.280         | 17.964       | 19.520         |
|           | 16QAM      | 17.884      | 19.280         | 17.884         | 19.200         | 17.884       | 19.280         |

**LTE Band 5:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 1.4 MHz   | QPSK       | 1.096       | 1.290          | 1.108          | 1.350          | 1.102        | 1.290          |
|           | 16QAM      | 1.102       | 1.326          | 1.102          | 1.410          | 1.090        | 1.296          |
| 3 MHz     | QPSK       | 2.683       | 2.880          | 2.683          | 2.904          | 2.683        | 2.892          |
|           | 16QAM      | 2.683       | 2.892          | 2.683          | 2.928          | 2.683        | 2.868          |
| 5 MHz     | QPSK       | 4.511       | 4.960          | 4.511          | 4.960          | 4.491        | 4.940          |
|           | 16QAM      | 4.491       | 4.940          | 4.511          | 4.960          | 4.511        | 4.980          |
| 10 MHz    | QPSK       | 8.942       | 9.720          | 8.942          | 9.560          | 8.942        | 9.680          |
|           | 16QAM      | 8.942       | 9.600          | 8.942          | 9.640          | 8.981        | 9.640          |

**LTE Band 7:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 5 MHz     | QPSK       | 4.511       | 4.940          | 4.511          | 4.980          | 4.491        | 4.940          |
|           | 16QAM      | 4.491       | 4.940          | 4.511          | 4.960          | 4.511        | 5.180          |
| 10 MHz    | QPSK       | 8.942       | 9.720          | 8.942          | 9.600          | 8.942        | 9.680          |
|           | 16QAM      | 8.942       | 9.520          | 8.942          | 9.680          | 8.942        | 9.600          |
| 15 MHz    | QPSK       | 13.533      | 14.760         | 13.413         | 14.640         | 13.533       | 14.760         |
|           | 16QAM      | 13.473      | 14.640         | 13.473         | 14.700         | 13.533       | 14.700         |
| 20 MHz    | QPSK       | 17.884      | 19.200         | 17.884         | 19.280         | 17.964       | 19.280         |
|           | 16QAM      | 17.964      | 19.120         | 17.884         | 19.280         | 17.884       | 19.280         |

**LTE Band 17**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 5 MHz     | QPSK       | 4.551       | 5.240          | 4.511          | 5.220          | 4.511        | 5.160          |
|           | 16QAM      | 4.511       | 5.180          | 4.531          | 5.260          | 4.531        | 5.240          |
| 10 MHz    | QPSK       | 8.942       | 9.960          | 8.942          | 9.800          | 8.942        | 9.920          |
|           | 16QAM      | 8.942       | 9.760          | 8.942          | 9.880          | 8.942        | 9.840          |

**LTE Band 38**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 5 MHz     | QPSK       | 4.511       | 5.220          | 4.511          | 5.040          | 4.511        | 5.060          |
|           | 16QAM      | 4.511       | 5.020          | 4.511          | 5.320          | 4.511        | 5.220          |
| 10 MHz    | QPSK       | 8.982       | 9.720          | 8.942          | 9.640          | 8.982        | 9.840          |
|           | 16QAM      | 8.942       | 9.520          | 8.942          | 9.560          | 8.942        | 9.800          |
| 15 MHz    | QPSK       | 13.533      | 14.640         | 13.473         | 15.240         | 13.473       | 14.700         |
|           | 16QAM      | 13.533      | 14.700         | 13.533         | 15.180         | 13.533       | 15.480         |
| 20 MHz    | QPSK       | 17.964      | 19.520         | 17.884         | 19.280         | 17.964       | 19.600         |
|           | 16QAM      | 17.884      | 19.200         | 17.884         | 19.600         | 17.884       | 19.520         |

**LTE Band 41**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 5 MHz     | QPSK       | 4.511       | 5.360          | 4.511          | 5.040          | 4.511        | 5.000          |
|           | 16QAM      | 4.511       | 5.140          | 4.511          | 5.300          | 4.511        | 5.000          |
| 10 MHz    | QPSK       | 8.942       | 9.640          | 8.942          | 9.680          | 8.942        | 9.720          |
|           | 16QAM      | 8.942       | 9.600          | 8.942          | 9.600          | 8.942        | 10.320         |
| 15 MHz    | QPSK       | 13.533      | 15.420         | 13.413         | 14.640         | 13.473       | 14.700         |
|           | 16QAM      | 13.533      | 15.540         | 13.533         | 15.900         | 13.533       | 16.380         |
| 20 MHz    | QPSK       | 17.964      | 19.200         | 17.884         | 19.280         | 17.884       | 19.280         |
|           | 16QAM      | 17.964      | 19.600         | 17.964         | 20.160         | 17.884       | 19.200         |

*Test plots refer to the Appendix A.*

## FCC §2.1051, §22.917(a), §24.238(a), §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

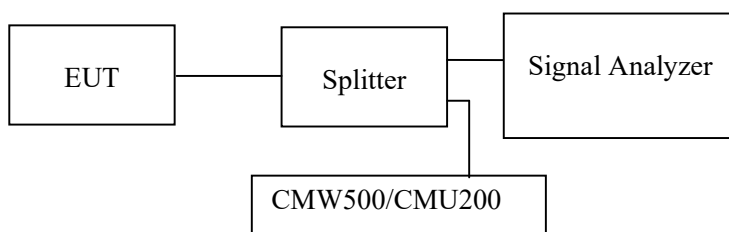
### Applicable Standard

FCC §2.1051, §22.917(a) and §24.238(a) and §27.53.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

### Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz. Sufficient scans were taken to show any out of band emissions up to 10<sup>th</sup> harmonic.



### Test Data

#### Environmental Conditions

|                    |            |
|--------------------|------------|
| Temperature:       | 28.2~29.0℃ |
| Relative Humidity: | 44~56 %    |
| ATM Pressure:      | 101.0kPa   |

*The testing was performed by Black Ding from 2021-10-27 to 2021-11-28.*

*EUT operation mode: Transmitting*

#### Test result: Pass

*Test plots refer to the Appendix B.*



## FCC §2.1051, §22.917(a), §24.238(a), §27.53, §90.691 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

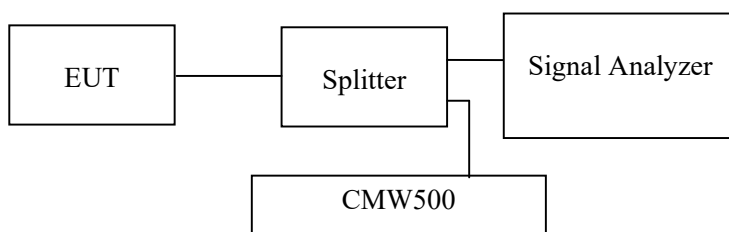
### Applicable Standard

FCC §2.1051, §22.917(a) and §24.238(a) and §27.53 and §90.691

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

### Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz. Sufficient scans were taken to show any out of band emissions up to 10<sup>th</sup> harmonic.



### Test Data

#### Environmental Conditions

|                    |          |
|--------------------|----------|
| Temperature:       | 26.5~27℃ |
| Relative Humidity: | 54~56 %  |
| ATM Pressure:      | 101.0kPa |

*The testing was performed by Chao Moon 2021-11-01 for Below 1GHz and 2021-11-02 for above 1GHz.*

*EUT operation mode:*

Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case X-axis of orientation was recorded)

*The worst case is as below:*

**30 MHz ~ 10 GHz:****Cellular Band**

| Frequency<br>(MHz) | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                    |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| GSM Mode           |                              |                     |               |                |                               |                            |                |                |
| Low channel        |                              |                     |               |                |                               |                            |                |                |
| 955.1              | -79.25                       | 87                  | 1.2           | H              | 11.79                         | -67.46                     | -13            | -54.46         |
| 955.1              | -76.24                       | 54                  | 1.1           | V              | 12.48                         | -63.76                     | -13            | -50.76         |
| 1648.4             | -45.47                       | 336                 | 2.1           | H              | -2.73                         | -48.20                     | -13            | -35.20         |
| 1648.4             | -44.31                       | 328                 | 1.6           | V              | -2.79                         | -47.10                     | -13            | -34.10         |
| 2472.6             | -40.28                       | 277                 | 1.6           | H              | 1.18                          | -39.10                     | -13            | -26.10         |
| 2472.6             | -37.81                       | 106                 | 1             | V              | 1.21                          | -36.60                     | -13            | -23.60         |
| 3296.8             | -44.94                       | 316                 | 1.8           | H              | 3.24                          | -41.70                     | -13            | -28.70         |
| 3296.8             | -42.87                       | 64                  | 1             | V              | 3.27                          | -39.60                     | -13            | -26.60         |
| Middle Channel     |                              |                     |               |                |                               |                            |                |                |
| 955.1              | -79.35                       | 34                  | 2.3           | H              | 11.79                         | -67.56                     | -13            | -54.56         |
| 955.1              | -76.24                       | 112                 | 2.3           | V              | 12.48                         | -63.76                     | -13            | -50.76         |
| 1673.2             | -41.23                       | 12                  | 1.4           | H              | -2.67                         | -43.90                     | -13            | -30.90         |
| 1673.2             | -39.86                       | 213                 | 1.8           | V              | -2.74                         | -42.60                     | -13            | -29.60         |
| 2509.8             | -38.72                       | 147                 | 2.3           | H              | 1.32                          | -37.40                     | -13            | -24.40         |
| 2509.8             | -35.86                       | 123                 | 1.7           | V              | 1.36                          | -34.50                     | -13            | -21.50         |
| 3346.4             | -44.41                       | 281                 | 1.3           | H              | 3.31                          | -41.10                     | -13            | -28.10         |
| 3346.4             | -41.82                       | 316                 | 1.3           | V              | 3.32                          | -38.50                     | -13            | -25.50         |
| High Channel       |                              |                     |               |                |                               |                            |                |                |
| 955.1              | -79.44                       | 323                 | 2.1           | H              | 11.79                         | -67.65                     | -13            | -54.65         |
| 955.1              | -76.34                       | 59                  | 1.4           | V              | 12.48                         | -63.86                     | -13            | -50.86         |
| 1697.6             | -37.26                       | 205                 | 1.4           | H              | -2.64                         | -39.90                     | -13            | -26.90         |
| 1697.6             | -35.61                       | 184                 | 2.0           | V              | -2.69                         | -38.30                     | -13            | -25.30         |
| 2546.4             | -37.47                       | 76                  | 1.5           | H              | 1.47                          | -36.00                     | -13            | -23.00         |
| 2546.4             | -35.42                       | 220                 | 1.2           | V              | 1.52                          | -33.90                     | -13            | -20.90         |
| 3395.2             | -44.08                       | 116                 | 2.2           | H              | 3.38                          | -40.70                     | -13            | -27.70         |
| 3395.2             | -41.77                       | 331                 | 2.4           | V              | 3.37                          | -38.40                     | -13            | -25.40         |

| Frequency<br>(MHz) | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                    |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| WCDMA Mode         |                              |                     |               |                |                               |                            |                |                |
| Low channel        |                              |                     |               |                |                               |                            |                |                |
| 951.23             | -78.60                       | 206                 | 2.4           | H              | 11.79                         | -66.81                     | -13            | -53.81         |
| 951.23             | -78.18                       | 102                 | 1.4           | V              | 12.48                         | -65.70                     | -13            | -52.70         |
| 1652.80            | -49.07                       | 111                 | 1.3           | H              | -2.73                         | -51.80                     | -13            | -38.80         |
| 1652.80            | -47.91                       | 153                 | 2.3           | V              | -2.79                         | -50.70                     | -13            | -37.70         |
| 2479.20            | -51.48                       | 95                  | 2.2           | H              | 1.18                          | -50.30                     | -13            | -37.30         |
| 2479.20            | -50.41                       | 284                 | 2.1           | V              | 1.21                          | -49.20                     | -13            | -36.20         |
| 3305.60            | -49.54                       | 6                   | 1.3           | H              | 3.24                          | -46.30                     | -13            | -33.30         |
| 3305.60            | -49.17                       | 106                 | 1.5           | V              | 3.27                          | -45.90                     | -13            | -32.90         |
| Middle Channel     |                              |                     |               |                |                               |                            |                |                |
| 951.23             | -79.07                       | 182                 | 2.3           | H              | 11.79                         | -67.28                     | -13            | -54.28         |
| 951.23             | -78.15                       | 54                  | 1.2           | V              | 12.48                         | -65.67                     | -13            | -52.67         |
| 1673.20            | -43.53                       | 232                 | 1             | H              | -2.67                         | -46.20                     | -13            | -33.20         |
| 1673.20            | -46.66                       | 234                 | 2.1           | V              | -2.74                         | -49.40                     | -13            | -36.40         |
| 2509.80            | -47.02                       | 86                  | 1.7           | H              | 1.32                          | -45.70                     | -13            | -32.70         |
| 2509.80            | -46.76                       | 194                 | 1.1           | V              | 1.36                          | -45.40                     | -13            | -32.40         |
| 3346.40            | -48.91                       | 275                 | 1.2           | H              | 3.31                          | -45.60                     | -13            | -32.60         |
| 3346.40            | -48.42                       | 335                 | 2.1           | V              | 3.32                          | -45.10                     | -13            | -32.10         |
| High Channel       |                              |                     |               |                |                               |                            |                |                |
| 951.23             | -78.92                       | 5                   | 1.7           | H              | 11.79                         | -67.13                     | -13            | -54.13         |
| 951.23             | -78.45                       | 266                 | 1.2           | V              | 12.48                         | -65.97                     | -13            | -52.97         |
| 1693.20            | -46.86                       | 243                 | 1.5           | H              | -2.64                         | -49.50                     | -13            | -36.50         |
| 1693.20            | -46.71                       | 90                  | 2.1           | V              | -2.69                         | -49.40                     | -13            | -36.40         |
| 2539.80            | -51.97                       | 174                 | 1.0           | H              | 1.47                          | -50.50                     | -13            | -37.50         |
| 2539.80            | -51.02                       | 31                  | 1.9           | V              | 1.52                          | -49.50                     | -13            | -36.50         |
| 3386.40            | -49.38                       | 337                 | 2.5           | H              | 3.38                          | -46.00                     | -13            | -33.00         |
| 3386.40            | -48.77                       | 264                 | 2.2           | V              | 3.37                          | -45.40                     | -13            | -32.40         |

**30 MHz ~ 20 GHz:****PCS Band**

| Frequency<br>(MHz) | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                    |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| GSM Mode           |                              |                     |               |                |                               |                            |                |                |
| Low channel        |                              |                     |               |                |                               |                            |                |                |
| 955.1              | -79.06                       | 53                  | 2.5           | H              | 11.79                         | -67.27                     | -13            | -54.27         |
| 955.1              | -78.43                       | 152                 | 2.1           | V              | 12.48                         | -65.95                     | -13            | -52.95         |
| 3700.4             | -38.76                       | 277                 | 2.2           | H              | 4.96                          | -33.80                     | -13            | -20.80         |
| 3700.4             | -36.99                       | 254                 | 1.2           | V              | 4.59                          | -32.40                     | -13            | -19.40         |
| Middle Channel     |                              |                     |               |                |                               |                            |                |                |
| 955.1              | -78.51                       | 318                 | 2.2           | H              | 11.79                         | -66.72                     | -13            | -53.72         |
| 955.1              | -77.72                       | 345                 | 1.9           | V              | 12.48                         | -65.24                     | -13            | -52.24         |
| 3760               | -37.61                       | 326                 | 2             | H              | 5.31                          | -32.30                     | -13            | -19.30         |
| 3760               | -39.53                       | 63                  | 1.2           | V              | 4.93                          | -34.60                     | -13            | -21.60         |
| High Channel       |                              |                     |               |                |                               |                            |                |                |
| 955.1              | -77.92                       | 308                 | 1.9           | H              | 11.79                         | -66.13                     | -13            | -53.13         |
| 955.1              | -78.25                       | 208                 | 2.2           | V              | 12.48                         | -65.77                     | -13            | -52.77         |
| 3819.6             | -38.24                       | 350                 | 1.1           | H              | 5.64                          | -32.60                     | -13            | -19.60         |
| 3819.6             | -37.97                       | 304                 | 1.5           | V              | 5.27                          | -32.70                     | -13            | -19.70         |
| WCDMA Mode         |                              |                     |               |                |                               |                            |                |                |
| Low channel        |                              |                     |               |                |                               |                            |                |                |
| 951.23             | -78.74                       | 17                  | 1             | H              | 11.79                         | -66.95                     | -13            | -53.95         |
| 951.23             | -77.86                       | 253                 | 1.4           | V              | 12.48                         | -65.38                     | -13            | -52.38         |
| 3704.80            | -50.96                       | 225                 | 1.7           | H              | 4.96                          | -46.00                     | -13            | -33.00         |
| 3704.80            | -50.59                       | 119                 | 2.3           | V              | 4.59                          | -46.00                     | -13            | -33.20         |
| Middle channel     |                              |                     |               |                |                               |                            |                |                |
| 951.23             | -78.06                       | 334                 | 1.6           | H              | 11.79                         | -66.27                     | -13            | -53.27         |
| 951.23             | -78.88                       | 144                 | 1.1           | V              | 12.48                         | -66.40                     | -13            | -53.40         |
| 3760.00            | -50.51                       | 338                 | 1.6           | H              | 5.31                          | -45.20                     | -13            | -32.20         |
| 3760.00            | -50.43                       | 180                 | 1.5           | V              | 4.93                          | -45.50                     | -13            | -32.50         |
| High channel       |                              |                     |               |                |                               |                            |                |                |
| 951.23             | -78.82                       | 211                 | 2.5           | H              | 11.79                         | -67.03                     | -13            | -54.03         |
| 951.23             | -77.98                       | 162                 | 1             | V              | 12.48                         | -65.50                     | -13            | -52.50         |
| 3815.20            | -48.84                       | 357                 | 2.1           | H              | 5.64                          | -43.20                     | -13            | -30.20         |
| 3815.20            | -48.97                       | 110                 | 2.3           | V              | 5.27                          | -43.70                     | -13            | -30.70         |

**LTE Band:** (Pre-scan with all the bandwidth, and worst case as below)

| Frequency<br>(MHz)                | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|-----------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                   |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 2                            |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz |                              |                     |               |                |                               |                            |                |                |
| 1.4MHz bandwidth, low channel     |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -79.07                       | 325                 | 2.2           | H              | 11.79                         | -67.28                     | -13            | -54.28         |
| 950.45                            | -77.60                       | 124                 | 2.5           | V              | 12.48                         | -65.12                     | -13            | -52.12         |
| 3701.40                           | -46.76                       | 290                 | 1.9           | H              | 4.96                          | -41.80                     | -13            | -28.80         |
| 3701.40                           | -48.39                       | 183                 | 1.8           | V              | 4.59                          | -43.80                     | -13            | -30.80         |
| 5552.10                           | -53.93                       | 88                  | 1.5           | H              | 10.63                         | -43.30                     | -13            | -30.30         |
| 5552.10                           | -52.78                       | 254                 | 1.4           | V              | 8.98                          | -43.80                     | -13            | -30.80         |
| 7402.80                           | -44.44                       | 303                 | 1.9           | H              | 14.06                         | -41.20                     | -13            | -28.20         |
| 7402.80                           | -46.17                       | 149                 | 2.3           | V              | 14.69                         | -42.90                     | -13            | -29.90         |
| 1.4MHz bandwidth, middle channel  |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -78.24                       | 56                  | 2.2           | H              | 11.79                         | -66.45                     | -13            | -53.45         |
| 950.45                            | -78.55                       | 70                  | 1.6           | V              | 12.48                         | -66.07                     | -13            | -53.07         |
| 3760.00                           | -45.11                       | 85                  | 1.8           | H              | 5.31                          | -39.80                     | -13            | -26.80         |
| 3760.00                           | -46.23                       | 106                 | 1.8           | V              | 4.93                          | -41.30                     | -13            | -28.30         |
| 5640.00                           | -53.88                       | 11                  | 1.6           | H              | 10.68                         | -43.20                     | -13            | -30.20         |
| 5640.00                           | -53.34                       | 22                  | 1.4           | V              | 9.24                          | -44.10                     | -13            | -31.10         |
| 7520.00                           | -45.51                       | 116                 | 1.9           | H              | 14.38                         | -42.20                     | -13            | -29.20         |
| 7520.00                           | -45.12                       | 212                 | 1.5           | V              | 15.16                         | -41.80                     | -13            | -28.80         |
| 1.4MHz bandwidth, high channel    |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -79.24                       | 88                  | 2.3           | H              | 11.79                         | -67.45                     | -13            | -54.45         |
| 950.45                            | -77.97                       | 342                 | 1.9           | V              | 12.48                         | -65.49                     | -13            | -52.49         |
| 3818.60                           | -46.14                       | 338                 | 1.8           | H              | 5.64                          | -40.50                     | -13            | -27.50         |
| 3818.60                           | -46.97                       | 268                 | 1.2           | V              | 5.27                          | -41.70                     | -13            | -28.70         |
| 5727.90                           | -54.93                       | 121                 | 1.6           | H              | 10.73                         | -44.20                     | -13            | -31.20         |
| 5727.90                           | -54.01                       | 18                  | 2             | V              | 9.51                          | -44.50                     | -13            | -31.50         |
| 7637.20                           | -57.71                       | 48                  | 1.8           | H              | 14.71                         | -43.00                     | -13            | -30.00         |
| 7637.20                           | -58.64                       | 68                  | 1.5           | V              | 15.34                         | -43.30                     | -13            | -30.30         |

| Frequency<br>(MHz)                | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|-----------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                   |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 4                            |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz |                              |                     |               |                |                               |                            |                |                |
| 1.4MHz bandwidth, low channel     |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -79.28                       | 120                 | 1.4           | H              | 11.79                         | -67.49                     | -13            | -54.49         |
| 950.45                            | -78.72                       | 233                 | 2.4           | V              | 12.48                         | -66.24                     | -13            | -53.24         |
| 3421.40                           | -46.23                       | 347                 | 2.1           | H              | 3.43                          | -42.80                     | -13            | -29.80         |
| 3421.40                           | -45.40                       | 252                 | 1.9           | V              | 3.4                           | -42.00                     | -13            | -29.00         |
| 5132.10                           | -54.62                       | 148                 | 2.4           | H              | 9.72                          | -44.90                     | -13            | -31.90         |
| 5132.10                           | -53.18                       | 56                  | 1.1           | V              | 8.38                          | -44.80                     | -13            | -31.80         |
| 6842.80                           | -49.39                       | 348                 | 1.1           | H              | 7.09                          | -42.30                     | -13            | -29.30         |
| 6842.80                           | -50.56                       | 32                  | 1             | V              | 7.16                          | -43.40                     | -13            | -30.40         |
| 1.4MHz bandwidth, middle channel  |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -78.31                       | 314                 | 1.5           | H              | 11.79                         | -66.52                     | -13            | -53.52         |
| 950.45                            | -77.96                       | 212                 | 2             | V              | 12.48                         | -65.48                     | -13            | -52.48         |
| 3465.00                           | -46.09                       | 186                 | 1.9           | H              | 3.49                          | -42.60                     | -13            | -29.60         |
| 3465.00                           | -46.55                       | 21                  | 1.6           | V              | 3.45                          | -43.10                     | -13            | -30.10         |
| 5197.50                           | -54.14                       | 253                 | 1.2           | H              | 9.84                          | -44.30                     | -13            | -31.30         |
| 5197.50                           | -52.01                       | 192                 | 2.3           | V              | 8.41                          | -43.60                     | -13            | -30.60         |
| 6930.00                           | -49.59                       | 297                 | 1.1           | H              | 7.09                          | -42.50                     | -13            | -29.50         |
| 6930.00                           | -49.46                       | 8                   | 1.5           | V              | 7.16                          | -42.30                     | -13            | -29.30         |
| 1.4MHz bandwidth, high channel    |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -77.86                       | 228                 | 1.3           | H              | 11.79                         | -66.07                     | -13            | -53.07         |
| 950.45                            | -77.99                       | 288                 | 1.9           | V              | 12.48                         | -65.51                     | -13            | -52.51         |
| 3508.60                           | -44.95                       | 65                  | 1.7           | H              | 3.55                          | -41.40                     | -13            | -28.40         |
| 3508.60                           | -45.00                       | 11                  | 1.4           | V              | 3.5                           | -41.50                     | -13            | -28.50         |
| 5262.90                           | -54.56                       | 134                 | 2             | H              | 9.96                          | -44.60                     | -13            | -31.60         |
| 5262.90                           | -52.24                       | 118                 | 2             | V              | 8.44                          | -43.80                     | -13            | -30.80         |
| 7017.20                           | -51.19                       | 59                  | 2             | H              | 7.09                          | -44.10                     | -13            | -31.10         |
| 7017.20                           | -50.56                       | 217                 | 2.4           | V              | 7.16                          | -43.40                     | -13            | -30.40         |

| Frequency<br>(MHz)                | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|-----------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                   |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 5                            |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-10GHz |                              |                     |               |                |                               |                            |                |                |
| 1.4MHz bandwidth, low channel     |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -78.46                       | 275                 | 1.3           | H              | 11.79                         | -66.67                     | -13            | -53.67         |
| 950.45                            | -78.07                       | 174                 | 2.5           | V              | 12.48                         | -65.59                     | -13            | -52.59         |
| 1649.40                           | -48.37                       | 171                 | 1.9           | H              | -2.73                         | -51.10                     | -13            | -38.10         |
| 1649.40                           | -49.91                       | 190                 | 2.1           | V              | -2.79                         | -52.70                     | -13            | -39.70         |
| 2474.10                           | -35.98                       | 147                 | 1.9           | H              | 1.18                          | -34.80                     | -13            | -21.80         |
| 2474.10                           | -37.51                       | 319                 | 1.8           | V              | 1.21                          | -36.30                     | -13            | -23.30         |
| 3298.80                           | -49.24                       | 359                 | 2.2           | H              | 3.24                          | -46.00                     | -13            | -33.00         |
| 3298.80                           | -49.87                       | 322                 | 2.5           | V              | 3.27                          | -46.60                     | -13            | -33.60         |
| 1.4MHz bandwidth, middle channel  |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -78.06                       | 212                 | 2.3           | H              | 11.79                         | -66.27                     | -13            | -53.27         |
| 950.45                            | -78.82                       | 294                 | 2.1           | V              | 12.48                         | -66.34                     | -13            | -53.34         |
| 1673.00                           | -43.73                       | 12                  | 1.5           | H              | -2.67                         | -46.40                     | -13            | -33.40         |
| 1673.00                           | -46.56                       | 36                  | 1.1           | V              | -2.74                         | -49.30                     | -13            | -36.30         |
| 2509.50                           | -52.62                       | 133                 | 1.2           | H              | 1.32                          | -51.30                     | -13            | -38.30         |
| 2509.50                           | -51.66                       | 116                 | 1.4           | V              | 1.36                          | -50.30                     | -13            | -37.30         |
| 3346.00                           | -49.31                       | 167                 | 1.3           | H              | 3.31                          | -46.00                     | -13            | -33.00         |
| 3346.00                           | -48.92                       | 296                 | 1.3           | V              | 3.32                          | -45.60                     | -13            | -32.60         |
| 1.4MHz bandwidth, high channel    |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -78.32                       | 196                 | 1.9           | H              | 11.79                         | -66.53                     | -13            | -53.53         |
| 950.45                            | -77.88                       | 113                 | 2.3           | V              | 12.48                         | -65.40                     | -13            | -52.40         |
| 1696.60                           | -48.46                       | 135                 | 1.2           | H              | -2.64                         | -51.10                     | -13            | -38.10         |
| 1696.60                           | -46.01                       | 205                 | 2.4           | V              | -2.69                         | -48.70                     | -13            | -35.70         |
| 2544.90                           | -52.57                       | 97                  | 1.1           | H              | 1.47                          | -51.10                     | -13            | -38.10         |
| 2544.90                           | -50.72                       | 151                 | 2.0           | V              | 1.52                          | -49.20                     | -13            | -36.20         |
| 3393.20                           | -48.88                       | 220                 | 2.0           | H              | 3.38                          | -45.50                     | -13            | -32.50         |
| 3393.20                           | -48.27                       | 314                 | 1.9           | V              | 3.37                          | -44.90                     | -13            | -31.90         |

| Frequency<br>(MHz)                  | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|-------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                     |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 7                              |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-26.5GHz |                              |                     |               |                |                               |                            |                |                |
| 5MHz bandwidth, low channel         |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -78.92                       | 133                 | 2.5           | H              | 11.79                         | -67.13                     | -25            | -42.13         |
| 950.45                              | -75.81                       | 214                 | 1.3           | V              | 12.48                         | -63.33                     | -25            | -38.33         |
| 5005.00                             | -53.60                       | 143                 | 1.2           | H              | 9.5                           | -44.10                     | -25            | -19.10         |
| 5005.00                             | -51.92                       | 135                 | 2.4           | V              | 8.32                          | -43.60                     | -25            | -18.60         |
| 7507.50                             | -57.38                       | 241                 | 1.1           | H              | 14.38                         | -43.00                     | -25            | -18.00         |
| 7507.50                             | -57.16                       | 208                 | 1.5           | V              | 15.16                         | -42.00                     | -25            | -17.00         |
| 5MHz bandwidth, middle channel      |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -78.06                       | 65                  | 2             | H              | 11.79                         | -66.27                     | -25            | -41.27         |
| 950.45                              | -76.60                       | 357                 | 2.3           | V              | 12.48                         | -64.12                     | -25            | -39.12         |
| 5070.00                             | -53.56                       | 278                 | 1.5           | H              | 9.56                          | -44.00                     | -25            | -19.00         |
| 5070.00                             | -52.24                       | 161                 | 1             | V              | 8.34                          | -43.90                     | -25            | -18.90         |
| 7605.00                             | -59.81                       | 64                  | 1.8           | H              | 14.71                         | -45.10                     | -25            | -20.10         |
| 7605.00                             | -60.04                       | 240                 | 1.1           | V              | 15.34                         | -44.70                     | -25            | -19.70         |
| 5MHz bandwidth, high channel        |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -78.95                       | 126                 | 1.1           | H              | 11.79                         | -67.16                     | -25            | -42.16         |
| 950.45                              | -75.64                       | 10                  | 1             | V              | 12.48                         | -63.16                     | -25            | -38.16         |
| 5135.00                             | -53.42                       | 244                 | 2             | H              | 9.72                          | -43.70                     | -25            | -18.70         |
| 5135.00                             | -51.78                       | 346                 | 1.8           | V              | 8.38                          | -43.40                     | -25            | -18.40         |
| 7702.50                             | -59.93                       | 102                 | 2.4           | H              | 15.03                         | -44.90                     | -25            | -19.90         |
| 7702.50                             | -60.11                       | 159                 | 1.9           | V              | 15.51                         | -44.60                     | -25            | -19.60         |



| Frequency<br>(MHz)                | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|-----------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                   |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 17                           |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-10GHz |                              |                     |               |                |                               |                            |                |                |
| 5MHz bandwidth, low channel       |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -78.18                       | 84                  | 2             | H              | 11.79                         | -66.39                     | -13            | -53.39         |
| 950.45                            | -77.51                       | 8                   | 2.4           | V              | 12.48                         | -65.03                     | -13            | -52.03         |
| 1413.00                           | -53.77                       | 37                  | 1.3           | H              | -0.53                         | -54.30                     | -13            | -41.30         |
| 1413.00                           | -52.96                       | 126                 | 2             | V              | -0.74                         | -53.70                     | -13            | -40.70         |
| 2119.50                           | -45.31                       | 344                 | 1.3           | H              | -0.89                         | -46.20                     | -13            | -33.20         |
| 2119.50                           | -45.78                       | 181                 | 2             | V              | -1.12                         | -46.90                     | -13            | -33.90         |
| 2826.00                           | -52.74                       | 23                  | 1.1           | H              | 2.24                          | -50.50                     | -13            | -37.50         |
| 2826.00                           | -52.23                       | 308                 | 1.8           | V              | 2.33                          | -49.90                     | -13            | -36.90         |
| 5MHz bandwidth, middle channel    |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -78.21                       | 97                  | 1.7           | H              | 11.79                         | -66.42                     | -13            | -53.42         |
| 950.45                            | -77.61                       | 320                 | 1.2           | V              | 12.48                         | -65.13                     | -13            | -52.13         |
| 1420.00                           | -55.57                       | 126                 | 2.1           | H              | -0.53                         | -56.10                     | -13            | -43.10         |
| 1420.00                           | -55.06                       | 310                 | 1.6           | V              | -0.74                         | -55.80                     | -13            | -42.80         |
| 2130.00                           | -46.31                       | 316                 | 1.7           | H              | -0.89                         | -47.20                     | -13            | -34.20         |
| 2130.00                           | -46.18                       | 190                 | 2.4           | V              | -1.12                         | -47.30                     | -13            | -34.30         |
| 2840.00                           | -52.54                       | 323                 | 1.4           | H              | 2.24                          | -50.30                     | -13            | -37.30         |
| 2840.00                           | -51.63                       | 187                 | 2.1           | V              | 2.33                          | -49.30                     | -13            | -36.30         |
| 5MHz bandwidth, high channel      |                              |                     |               |                |                               |                            |                |                |
| 950.45                            | -78.56                       | 303                 | 2.3           | H              | 11.79                         | -66.77                     | -13            | -53.77         |
| 950.45                            | -78.24                       | 25                  | 2.4           | V              | 12.48                         | -65.76                     | -13            | -52.76         |
| 1427.00                           | -54.67                       | 287                 | 1.9           | H              | -0.53                         | -55.20                     | -13            | -42.20         |
| 1427.00                           | -54.16                       | 265                 | 1.3           | V              | -0.74                         | -54.90                     | -13            | -41.90         |
| 2140.50                           | -45.61                       | 244                 | 1             | H              | -0.89                         | -46.50                     | -13            | -33.50         |
| 2140.50                           | -45.88                       | 268                 | 2             | V              | -1.12                         | -47.00                     | -13            | -34.00         |
| 2854.00                           | -53.34                       | 347                 | 1.4           | H              | 2.24                          | -51.10                     | -13            | -38.10         |
| 2854.00                           | -53.03                       | 107                 | 1.2           | V              | 2.33                          | -50.70                     | -13            | -37.70         |

| Frequency<br>(MHz)                  | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|-------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                     |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 38                             |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-26.5GHz |                              |                     |               |                |                               |                            |                |                |
| 5MHz bandwidth, low channel         |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -78.09                       | 181                 | 1.4           | H              | 11.79                         | -66.30                     | -25            | -41.30         |
| 950.45                              | -76.21                       | 359                 | 1.7           | V              | 12.48                         | -63.73                     | -25            | -38.73         |
| 5145.00                             | -54.31                       | 334                 | 1.2           | H              | 9.81                          | -44.50                     | -25            | -19.50         |
| 5145.00                             | -52.33                       | 238                 | 2.3           | V              | 8.43                          | -43.90                     | -25            | -18.90         |
| 7717.50                             | -60.93                       | 330                 | 1.2           | H              | 15.03                         | -45.90                     | -25            | -20.90         |
| 7717.50                             | -60.91                       | 267                 | 2.2           | V              | 15.51                         | -45.40                     | -25            | -20.40         |
| 5MHz bandwidth, middle channel      |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -78.58                       | 50                  | 2.4           | H              | 11.79                         | -66.79                     | -25            | -41.79         |
| 950.45                              | -76.20                       | 149                 | 2.2           | V              | 12.48                         | -63.72                     | -25            | -38.72         |
| 5190.00                             | -54.01                       | 168                 | 1.9           | H              | 9.81                          | -44.20                     | -25            | -19.20         |
| 5190.00                             | -52.03                       | 311                 | 1.2           | V              | 8.43                          | -43.60                     | -25            | -18.60         |
| 7785.00                             | -59.33                       | 330                 | 1.4           | H              | 15.03                         | -44.30                     | -25            | -19.30         |
| 7785.00                             | -59.41                       | 38                  | 1.8           | V              | 15.51                         | -43.90                     | -25            | -18.90         |
| 5MHz bandwidth, high channel        |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -77.94                       | 240                 | 1.1           | H              | 11.79                         | -66.15                     | -25            | -41.15         |
| 950.45                              | -76.87                       | 173                 | 1.5           | V              | 12.48                         | -64.39                     | -25            | -39.39         |
| 5235.00                             | -53.51                       | 133                 | 2.3           | H              | 9.81                          | -43.70                     | -25            | -18.70         |
| 5235.00                             | -50.83                       | 269                 | 1.2           | V              | 8.43                          | -42.40                     | -25            | -17.40         |
| 7852.50                             | -59.23                       | 166                 | 2.4           | H              | 15.03                         | -44.20                     | -25            | -19.20         |
| 7852.50                             | -59.01                       | 75                  | 1.3           | V              | 15.51                         | -43.50                     | -25            | -18.50         |

| Frequency<br>(MHz)                  | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|-------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                     |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 41                             |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-26.5GHz |                              |                     |               |                |                               |                            |                |                |
| 5MHz bandwidth, low channel         |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -78.56                       | 356                 | 2.1           | H              | 11.79                         | -66.77                     | -25            | -41.77         |
| 950.45                              | -75.80                       | 175                 | 1.3           | V              | 12.48                         | -63.32                     | -25            | -38.32         |
| 5095.00                             | -52.7                        | 216                 | 1.4           | H              | 9.5                           | -43.20                     | -25            | -18.20         |
| 5095.00                             | -51.12                       | 84                  | 1.7           | V              | 8.32                          | -42.80                     | -25            | -17.80         |
| 7642.50                             | -60.01                       | 268                 | 1.3           | H              | 14.71                         | -45.30                     | -25            | -20.30         |
| 7642.50                             | -60.04                       | 232                 | 1.9           | V              | 15.34                         | -44.70                     | -25            | -19.70         |
| 5MHz bandwidth, middle channel      |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -78.37                       | 329                 | 2.1           | H              | 11.79                         | -66.58                     | -25            | -41.58         |
| 950.45                              | -75.74                       | 42                  | 2.3           | V              | 12.48                         | -63.26                     | -25            | -38.26         |
| 5200.00                             | -53.31                       | 352                 | 1.5           | H              | 9.81                          | -43.50                     | -25            | -18.50         |
| 5200.00                             | -51.23                       | 110                 | 1.3           | V              | 8.43                          | -42.80                     | -25            | -17.80         |
| 7800.00                             | -59.33                       | 71                  | 1             | H              | 15.03                         | -44.30                     | -25            | -19.30         |
| 7800.00                             | -59.31                       | 85                  | 1.2           | V              | 15.51                         | -43.80                     | -25            | -18.80         |
| 5MHz bandwidth, high channel        |                              |                     |               |                |                               |                            |                |                |
| 950.45                              | -78.37                       | 99                  | 2             | H              | 11.79                         | -66.58                     | -25            | -41.58         |
| 950.45                              | -75.67                       | 195                 | 2.2           | V              | 12.48                         | -63.19                     | -25            | -38.19         |
| 5305.00                             | -50.41                       | 327                 | 1.2           | H              | 10.11                         | -40.30                     | -25            | -15.30         |
| 5305.00                             | -40.54                       | 143                 | 1.2           | V              | 8.54                          | -32.00                     | -25            | -7.00          |
| 7957.50                             | -60.75                       | 226                 | 1.9           | H              | 15.35                         | -45.40                     | -25            | -20.40         |
| 7957.50                             | -60.68                       | 147                 | 1.4           | V              | 15.68                         | -45.00                     | -25            | -20.00         |

**Note:**

Absolute Level = Reading Level + Substituted Factor

Substituted Factor contains: SG Level - Cable loss+ Antenna Gain

Margin = Limit - Absolute Level

dBd is for the ERP, dBi is for EIRP.

## FCC§ 22.917 (a), § 24.238 (a),§27.53 - BAND EDGES

### Applicable Standard

According to § 22.917(a), the power of any emissions 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.

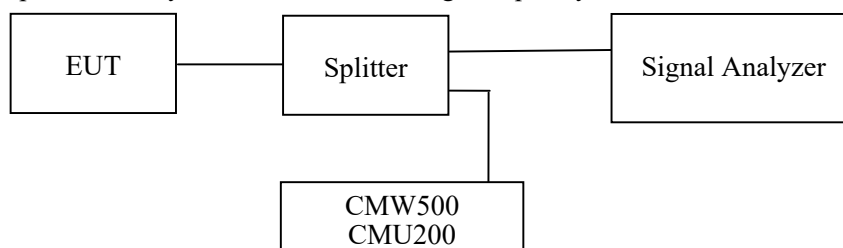
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

According to FCC §27.53 (c)(h)(m), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

### Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



### Test Data

#### Environmental Conditions

|                    |              |
|--------------------|--------------|
| Temperature:       | 27.6~28.5℃   |
| Relative Humidity: | 58~62 %      |
| ATM Pressure:      | 101.0~102kPa |

*The testing was performed by Black Ding from 2021-10-27 to 2021-11-24.*

*EUT operation mode: Transmitting (Worst case)*

**Test Result: Pass**

*Test plots refer to the Appendix C.*

## **FCC § 2.1055, § 22.355, § 24.235, §27.54, §90.213- FREQUENCY STABILITY**

### **Applicable Standard**

FCC § 2.1055, §22.355, §24.235, §27.54 and §90.213.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

| Frequency Range (MHz) | Base, fixed (ppm) | Mobile ≤ 3 watts (ppm) | Mobile > 3 watts (ppm) |
|-----------------------|-------------------|------------------------|------------------------|
| 25 to 50              | 20.0              | 20.0                   | 50.0                   |
| 50 to 450             | 5.0               | 5.0                    | 50.0                   |
| 450 to 512            | 2.5               | 5.0                    | 5.0                    |
| 821 to 896            | 1.5               | 2.5                    | 2.5                    |
| 928 to 929.           | 5.0               | N/A                    | N/A                    |
| 929 to 960.           | 1.5               | N/A                    | N/A                    |
| 2110 to 2220          | 10.0              | N/A                    | N/A                    |

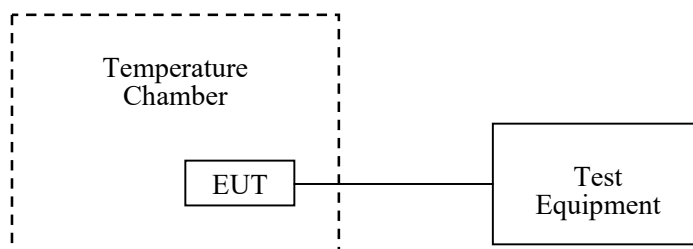
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

### **Test Procedure**

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



**Test Data****Environmental Conditions**

|                           |          |
|---------------------------|----------|
| <b>Temperature:</b>       | 27.6℃    |
| <b>Relative Humidity:</b> | 58 %     |
| <b>ATM Pressure:</b>      | 101.0kPa |

*The testing was performed by Black Ding from 2021-10-27 to 2021-10-28.*

*EUT operation mode: Transmitting*

**Test Result: Pass**

*Please refer to the following tables.*

**Cellular Band (Part 22H)****GSM Mode**

| Middle Channel, $f_0=836.6\text{MHz}$ |                               |                      |                       |             |
|---------------------------------------|-------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                      | Voltage Supplied ( $V_{DC}$ ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                   | N.V.                          | 5                    | 0.0060                | 2.5         |
| -20                                   |                               | 4                    | -0.0048               | 2.5         |
| -10                                   |                               | 3                    | 0.0036                | 2.5         |
| 0                                     |                               | 6                    | 0.0072                | 2.5         |
| 10                                    |                               | -3                   | -0.0036               | 2.5         |
| 20                                    |                               | 8                    | 0.0096                | 2.5         |
| 30                                    |                               | -6                   | -0.0072               | 2.5         |
| 40                                    |                               | 7                    | 0.0084                | 2.5         |
| 50                                    |                               | 8                    | 0.0096                | 2.5         |
| 20                                    | L.V.                          | 4                    | 0.0048                | 2.5         |
|                                       | H.V.                          | 2                    | 0.0024                | 2.5         |

**EDGE Mode**

| Middle Channel, $f_0=836.6\text{MHz}$ |                               |                      |                       |             |
|---------------------------------------|-------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                      | Voltage Supplied ( $V_{DC}$ ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                   | N.V.                          | -4                   | 0.0048                | 2.5         |
| -20                                   |                               | -3                   | -0.0036               | 2.5         |
| -10                                   |                               | -7                   | -0.0084               | 2.5         |
| 0                                     |                               | 8                    | 0.0096                | 2.5         |
| 10                                    |                               | 6                    | 0.0072                | 2.5         |
| 20                                    |                               | 4                    | 0.0048                | 2.5         |
| 30                                    |                               | 7                    | 0.0084                | 2.5         |
| 40                                    |                               | -6                   | -0.0072               | 2.5         |
| 50                                    |                               | -5                   | -0.0060               | 2.5         |
| 20                                    | L.V.                          | 4                    | 0.0048                | 2.5         |
|                                       | H.V.                          | -6                   | -0.0072               | 2.5         |

**WCDMA Mode**

| Middle Channel, $f_0=836.6\text{MHz}$ |                               |                      |                       |             |
|---------------------------------------|-------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                      | Voltage Supplied ( $V_{DC}$ ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                   | N.V.                          | -8.22                | -0.0098               | 2.5         |
| -20                                   |                               | 9.14                 | 0.0109                | 2.5         |
| -10                                   |                               | 8.13                 | 0.0097                | 2.5         |
| 0                                     |                               | 9.21                 | 0.0110                | 2.5         |
| 10                                    |                               | 8.22                 | 0.0098                | 2.5         |
| 20                                    |                               | -10.43               | -0.0125               | 2.5         |
| 30                                    |                               | 8.05                 | 0.0096                | 2.5         |
| 40                                    |                               | 11.02                | 0.0132                | 2.5         |
| 50                                    |                               | 10.01                | 0.0120                | 2.5         |
| 20                                    | L.V.                          | 10.02                | 0.0120                | 2.5         |
|                                       | H.V.                          | 10.01                | 0.0120                | 2.5         |

**PCS Band (Part 24E)****GSM Mode**

| Middle Channel, $f_0=1880.0$ MHz |                                     |                      |                       |        |
|----------------------------------|-------------------------------------|----------------------|-----------------------|--------|
| Temperature (°C)                 | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Result |
| -30                              | N.V.                                | 3                    | -0.0016               | pass   |
| -20                              |                                     | -8                   | -0.0042               | pass   |
| -10                              |                                     | 6                    | 0.0032                | pass   |
| 0                                |                                     | 8                    | 0.0042                | pass   |
| 10                               |                                     | -1                   | 0.0005                | pass   |
| 20                               |                                     | 18                   | 0.0096                | pass   |
| 30                               |                                     | -3                   | -0.0016               | pass   |
| 40                               |                                     | 7                    | 0.0037                | pass   |
| 50                               |                                     | 10                   | 0.0054                | pass   |
| 20                               | L.V.                                | -3                   | -0.0016               | pass   |
|                                  | H.V.                                | -2                   | -0.0011               | pass   |

**EDGE Mode**

| Middle Channel, $f_0=1880.0$ MHz |                                     |                      |                       |        |
|----------------------------------|-------------------------------------|----------------------|-----------------------|--------|
| Temperature (°C)                 | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Result |
| -30                              | N.V.                                | 4                    | -0.0021               | pass   |
| -20                              |                                     | -4                   | -0.0021               | pass   |
| -10                              |                                     | -5                   | -0.0027               | pass   |
| 0                                |                                     | 3                    | -0.0016               | pass   |
| 10                               |                                     | -4                   | -0.0021               | pass   |
| 20                               |                                     | 19                   | 0.0101                | pass   |
| 30                               |                                     | 6                    | 0.0032                | pass   |
| 40                               |                                     | 8                    | 0.0042                | pass   |
| 50                               |                                     | -7                   | -0.0037               | pass   |
| 20                               | L.V.                                | 3                    | 0.0016                | pass   |
|                                  | H.V.                                | 6                    | 0.0032                | pass   |



**WCDMA Mode**

| Middle Channel, $f_0=1880.0$ MHz |                                     |                      |                       |        |
|----------------------------------|-------------------------------------|----------------------|-----------------------|--------|
| Temperature (°C)                 | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Result |
| -30                              | N.V.                                | -11.32               | -0.0060               | pass   |
| -20                              |                                     | -12.11               | -0.0064               | pass   |
| -10                              |                                     | -13.23               | -0.0070               | pass   |
| 0                                |                                     | -14.11               | -0.0075               | pass   |
| 10                               |                                     | -13.11               | -0.0070               | pass   |
| 20                               |                                     | -9.91                | -0.0053               | pass   |
| 30                               |                                     | -10.05               | -0.0053               | pass   |
| 40                               |                                     | -10.03               | -0.0053               | pass   |
| 50                               |                                     | -11.28               | -0.0060               | pass   |
| 20                               | L.V.                                | -11.13               | -0.0059               | pass   |
|                                  | H.V.                                | -10.02               | -0.0053               | pass   |

**LTE:**  
**QPSK:**  
**Band 2:**

| 10.0 MHz Middle Channel, $f_0=1880$ MHz |                                     |                      |                       |        |
|-----------------------------------------|-------------------------------------|----------------------|-----------------------|--------|
| Temperature (°C)                        | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Result |
| -30                                     | N.V.                                | 10                   | -0.0053               | pass   |
| -20                                     |                                     | 8                    | -0.0043               | pass   |
| -10                                     |                                     | -6                   | -0.0032               | pass   |
| 0                                       |                                     | 3                    | 0.0016                | pass   |
| 10                                      |                                     | 8                    | 0.0043                | pass   |
| 20                                      |                                     | 6                    | 0.0032                | pass   |
| 30                                      |                                     | 4                    | 0.0021                | pass   |
| 40                                      |                                     | 7                    | 0.0037                | pass   |
| 50                                      |                                     | -10                  | -0.0053               | pass   |
| 20                                      | L.V.                                | -8                   | -0.0043               | pass   |
|                                         | H.V.                                | -7                   | -0.0037               | pass   |

**Band 4:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 1710.3256            | 1754.8745            | 1710                       | 1755                       |
| -20              |                                   | 1710.3161            | 1754.8742            | 1710                       | 1755                       |
| -10              |                                   | 1710.2133            | 1754.8772            | 1710                       | 1755                       |
| 0                |                                   | 1710.2129            | 1754.8751            | 1710                       | 1755                       |
| 10               |                                   | 1710.2123            | 1754.8743            | 1710                       | 1755                       |
| 20               |                                   | 1710.3162            | 1754.8738            | 1710                       | 1755                       |
| 30               |                                   | 1710.3122            | 1754.8736            | 1710                       | 1755                       |
| 40               |                                   | 1710.2142            | 1754.8751            | 1710                       | 1755                       |
| 50               |                                   | 1710.2154            | 1754.8753            | 1710                       | 1755                       |
| 20               | L.V.                              | 1710.2142            | 1754.8778            | 1710                       | 1755                       |
|                  | H.V.                              | 1710.2146            | 1754.8767            | 1710                       | 1755                       |

**Band 5:**

| 10.0 MHz Middle Channel, f <sub>0</sub> =836.5MHz |                                     |                      |                       |             |
|---------------------------------------------------|-------------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                                  | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                               | N.V.                                | 5                    | 0.006                 | 2.5         |
| -20                                               |                                     | -10                  | -0.0120               | 2.5         |
| -10                                               |                                     | -4                   | -0.0048               | 2.5         |
| 0                                                 |                                     | 6                    | 0.0072                | 2.5         |
| 10                                                |                                     | 10                   | 0.0120                | 2.5         |
| 20                                                |                                     | 8                    | 0.0096                | 2.5         |
| 30                                                |                                     | 7                    | 0.0084                | 2.5         |
| 40                                                |                                     | 10                   | -0.0120               | 2.5         |
| 50                                                |                                     | 3                    | 0.0036                | 2.5         |
| 20                                                | L.V.                                | -9                   | -0.0108               | 2.5         |
|                                                   | H.V.                                | -7                   | -0.0084               | 2.5         |

**Band 7:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2500.8925            | 2569.9845            | 2500                       | 2570                       |
| -20              |                                   | 2500.8953            | 2569.9955            | 2500                       | 2570                       |
| -10              |                                   | 2500.8832            | 2569.9813            | 2500                       | 2570                       |
| 0                |                                   | 2500.8815            | 2569.9717            | 2500                       | 2570                       |
| 10               |                                   | 2500.7917            | 2569.9862            | 2500                       | 2570                       |
| 20               |                                   | 2500.7814            | 2569.9436            | 2500                       | 2570                       |
| 30               |                                   | 2500.7742            | 2569.9521            | 2500                       | 2570                       |
| 40               |                                   | 2500.7543            | 2569.9811            | 2500                       | 2570                       |
| 50               |                                   | 2500.7526            | 2569.9821            | 2500                       | 2570                       |
| 20               | L.V.                              | 2500.7425            | 2569.9723            | 2500                       | 2570                       |
|                  | H.V.                              | 2500.7547            | 2569.9642            | 2500                       | 2570                       |

**Band 17:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 704.1293             | 715.8468             | 704                        | 716                        |
| -20              |                                   | 704.1233             | 715.8438             | 704                        | 716                        |
| -10              |                                   | 704.1276             | 715.8442             | 704                        | 716                        |
| 0                |                                   | 704.1217             | 715.8468             | 704                        | 716                        |
| 10               |                                   | 704.1247             | 715.8459             | 704                        | 716                        |
| 20               |                                   | 704.1291             | 715.8487             | 704                        | 716                        |
| 30               |                                   | 704.1258             | 715.8488             | 704                        | 716                        |
| 40               |                                   | 704.1291             | 715.8497             | 704                        | 716                        |
| 50               |                                   | 704.1262             | 715.8455             | 704                        | 716                        |
| 20               | L.V.                              | 704.1210             | 715.8460             | 704                        | 716                        |
|                  | H.V.                              | 704.1266             | 715.8441             | 704                        | 716                        |

**Band 38:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2570.8396            | 2619.9816            | 2570                       | 2620                       |
| -20              |                                   | 2570.8010            | 2619.8724            | 2570                       | 2620                       |
| -10              |                                   | 2570.7200            | 2619.7623            | 2570                       | 2620                       |
| 0                |                                   | 2570.6100            | 2619.6522            | 2570                       | 2620                       |
| 10               |                                   | 2570.5001            | 2619.5421            | 2570                       | 2620                       |
| 20               |                                   | 2570.3904            | 2619.4321            | 2570                       | 2620                       |
| 30               |                                   | 2570.2801            | 2619.3221            | 2570                       | 2620                       |
| 40               |                                   | 2570.1706            | 2619.2121            | 2570                       | 2620                       |
| 50               |                                   | 2570.1632            | 2619.1370            | 2570                       | 2620                       |
| 20               | L.V.                              | 2570.1522            | 2619.1201            | 2570                       | 2620                       |
|                  | H.V.                              | 2570.1028            | 2619.0034            | 2570                       | 2620                       |

**Band 41:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2545.8724            | 2654.9746            | 2545                       | 2655                       |
| -20              |                                   | 2545.8622            | 2654.8653            | 2545                       | 2655                       |
| -10              |                                   | 2545.7621            | 2654.8754            | 2545                       | 2655                       |
| 0                |                                   | 2545.6522            | 2654.7652            | 2545                       | 2655                       |
| 10               |                                   | 2545.5723            | 2654.5654            | 2545                       | 2655                       |
| 20               |                                   | 2545.4320            | 2654.5453            | 2545                       | 2655                       |
| 30               |                                   | 2545.3121            | 2654.4357            | 2545                       | 2655                       |
| 40               |                                   | 2545.2121            | 2654.2652            | 2545                       | 2655                       |
| 50               |                                   | 2545.1912            | 2654.1252            | 2545                       | 2655                       |
| 20               | L.V.                              | 2545.6621            | 2654.0851            | 2545                       | 2655                       |
|                  | H.V.                              | 2545.7624            | 2654.0702            | 2545                       | 2655                       |

Note: the applicant declared the operating frequency range is 2545MHz-2655MHz.

**16QAM:****Band 2:**

| 10.0 MHz Middle Channel, $f_0=1880\text{MHz}$ |                                     |                      |                       |        |
|-----------------------------------------------|-------------------------------------|----------------------|-----------------------|--------|
| Temperature (°C)                              | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Result |
| -30                                           | N.V.                                | 9                    | 0.0048                | pass   |
| -20                                           |                                     | 7                    | 0.0037                | pass   |
| -10                                           |                                     | 5                    | 0.0027                | pass   |
| 0                                             |                                     | 8                    | 0.0043                | pass   |
| 10                                            |                                     | 10                   | -0.0053               | pass   |
| 20                                            |                                     | -10                  | -0.0053               | pass   |
| 30                                            |                                     | -7                   | -0.0037               | pass   |
| 40                                            |                                     | 9                    | 0.0048                | pass   |
| 50                                            |                                     | -6                   | -0.0032               | pass   |
| 20                                            | L.V.                                | 6                    | 0.0032                | pass   |
|                                               | H.V.                                | 8                    | 0.0043                | pass   |

**Band 4:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 1710.3764            | 1754.8642            | 1710                       | 1755                       |
| -20              |                                   | 1710.3753            | 1754.8534            | 1710                       | 1755                       |
| -10              |                                   | 1710.3725            | 1754.8628            | 1710                       | 1755                       |
| 0                |                                   | 1710.3653            | 1754.7954            | 1710                       | 1755                       |
| 10               |                                   | 1710.3652            | 1754.7972            | 1710                       | 1755                       |
| 20               |                                   | 1710.2636            | 1754.7835            | 1710                       | 1755                       |
| 30               |                                   | 1710.3552            | 1754.7756            | 1710                       | 1755                       |
| 40               |                                   | 1710.3572            | 1754.7682            | 1710                       | 1755                       |
| 50               |                                   | 1710.3655            | 1754.7718            | 1710                       | 1755                       |
| 20               | L.V.                              | 1710.3652            | 1754.7436            | 1710                       | 1755                       |
|                  | H.V.                              | 1710.3633            | 1754.7428            | 1710                       | 1755                       |

**Band 5:**

| 10.0 MHz Middle Channel, $f_0=836.5\text{MHz}$ |                               |                      |                       |             |
|------------------------------------------------|-------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                               | Voltage Supplied ( $V_{DC}$ ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                            | N.V.                          | 4                    | 0.0048                | 2.5         |
| -20                                            |                               | 6                    | 0.0072                | 2.5         |
| -10                                            |                               | -10                  | -0.0120               | 2.5         |
| 0                                              |                               | 5                    | 0.0036                | 2.5         |
| 10                                             |                               | 7                    | 0.0084                | 2.5         |
| 20                                             |                               | -8                   | -0.0096               | 2.5         |
| 30                                             |                               | 4                    | 0.0048                | 2.5         |
| 40                                             |                               | 6                    | 0.0072                | 2.5         |
| 50                                             |                               | -6                   | -0.0072               | 2.5         |
| 20                                             | L.V.                          | -3                   | -0.0036               | 2.5         |
|                                                | H.V.                          | 7                    | 0.0084                | 2.5         |

**Band 7:**

| 10 MHz Bandwidth |                             |             |             |                   |                   |
|------------------|-----------------------------|-------------|-------------|-------------------|-------------------|
| Temperature (°C) | Power Supplied ( $V_{DC}$ ) | $F_L$ (MHz) | $F_H$ (MHz) | $F_L$ Limit (MHz) | $F_H$ Limit (MHz) |
| -30              | N.V.                        | 2500.7452   | 2569.8512   | 2500              | 2570              |
| -20              |                             | 2500.7336   | 2569.8544   | 2500              | 2570              |
| -10              |                             | 2500.7317   | 2569.8435   | 2500              | 2570              |
| 0                |                             | 2500.7235   | 2569.8533   | 2500              | 2570              |
| 10               |                             | 2500.6345   | 2569.8235   | 2500              | 2570              |
| 20               |                             | 2500.6238   | 2569.7865   | 2500              | 2570              |
| 30               |                             | 2500.6332   | 2569.7855   | 2500              | 2570              |
| 40               |                             | 2500.6327   | 2569.8437   | 2500              | 2570              |
| 50               |                             | 2500.6329   | 2569.8444   | 2500              | 2570              |
| 20               | L.V.                        | 2500.6231   | 2569.8341   | 2500              | 2570              |
|                  | H.V.                        | 2500.5425   | 2569.8352   | 2500              | 2570              |

**Band 17:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 704.1232             | 715.8468             | 704                        | 716                        |
| -20              |                                   | 704.1235             | 715.8477             | 704                        | 716                        |
| -10              |                                   | 704.1251             | 715.8435             | 704                        | 716                        |
| 0                |                                   | 704.1237             | 715.8436             | 704                        | 716                        |
| 10               |                                   | 704.1241             | 715.8433             | 704                        | 716                        |
| 20               |                                   | 704.1244             | 715.8432             | 704                        | 716                        |
| 30               |                                   | 704.1248             | 715.8437             | 704                        | 716                        |
| 40               |                                   | 704.1237             | 715.8446             | 704                        | 716                        |
| 50               |                                   | 704.1225             | 715.8448             | 704                        | 716                        |
| 20               | L.V.                              | 704.1211             | 715.8455             | 704                        | 716                        |
|                  | H.V.                              | 704.1247             | 715.8435             | 704                        | 716                        |

**Band 38:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2570.9698            | 2619.9876            | 2570                       | 2620                       |
| -20              |                                   | 2570.8915            | 2619.8791            | 2570                       | 2620                       |
| -10              |                                   | 2570.7827            | 2619.7692            | 2570                       | 2620                       |
| 0                |                                   | 2570.6725            | 2619.6595            | 2570                       | 2620                       |
| 10               |                                   | 2570.5647            | 2619.5486            | 2570                       | 2620                       |
| 20               |                                   | 2570.4532            | 2619.4380            | 2570                       | 2620                       |
| 30               |                                   | 2570.3425            | 2619.3231            | 2570                       | 2620                       |
| 40               |                                   | 2570.2317            | 2619.2155            | 2570                       | 2620                       |
| 50               |                                   | 2570.1255            | 2619.1047            | 2570                       | 2620                       |
| 20               | L.V.                              | 2570.0172            | 2619.8753            | 2570                       | 2620                       |
|                  | H.V.                              | 2570.0033            | 2619.7628            | 2570                       | 2620                       |

**Band 41:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2545.9488            | 2654.9662            | 2545                       | 2655                       |
| -20              |                                   | 2545.8474            | 2654.8554            | 2545                       | 2655                       |
| -10              |                                   | 2545.7352            | 2654.7488            | 2545                       | 2655                       |
| 0                |                                   | 2545.6325            | 2654.6387            | 2545                       | 2655                       |
| 10               |                                   | 2545.5111            | 2654.5284            | 2545                       | 2655                       |
| 20               |                                   | 2545.4165            | 2654.4156            | 2545                       | 2655                       |
| 30               |                                   | 2545.2986            | 2654.3083            | 2545                       | 2655                       |
| 40               |                                   | 2545.1878            | 2654.1977            | 2545                       | 2655                       |
| 50               |                                   | 2545.1832            | 2654.0826            | 2545                       | 2655                       |
| 20               | L.V.                              | 2545.1626            | 2654.0735            | 2545                       | 2655                       |
|                  | H.V.                              | 2545.0577            | 2654.0383            | 2545                       | 2655                       |

Note: the applicant declared the operating frequency range is 2545MHz-2655MHz.

\*\*\*\*\* **END OF REPORT** \*\*\*\*\*