# MEASUREMENT REPORT

## FCC PART 90

**FCC ID:** XMR2021RM502QGL

**Application:** Quectel Wireless Solutions Company Limited

**Application Type:** Certification

**Product:** 5G Sub-6 GHz M.2 Module

**Model No.:** RM502Q-GL

**Brand Name:** Quectel

**FCC Rule Part(s):** Part 90 Subpart S

**Test Procedure(s):** ANSI C63.26: 2015

**Test Date:** January 31 ~ April 30, 2021

Reviewed By: Sunny Sun

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

# Revision History

| Report No. | Version | Description | Issue Date | Note |
|---|---|---|---|---|
| 2101RSU049-U4 | Rev. 01 | Initial Report | 05-19-2021 | Valid |
| | | | | |

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# 1. GENERAL INFORMATION

## 1.1. Applicant

Quectel Wireless Solutions Company Limited
Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

## 1.2. Manufacturer

Quectel Wireless Solutions Company Limited
Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

## 1.3. Testing Facility

| | | |
|---|---|---|
| ☒ | **Test Site - MRT Suzhou Laboratory** | |
| | **Laboratory Location (Suzhou - Wuzhong)** | |
| | D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China | |
| | **Laboratory Location (Suzhou - SIP)** | |
| | 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China | |
| | **Laboratory Accreditations** | |
| | A2LA: 3628.01 | CNAS: L10551 |
| | FCC: CN1166 | ISED: CN0001 |
| | VCCI: R-20025, G-20034, C-20020, T-20020 | |
| ☐ | **Test Site - MRT Shenzhen Laboratory** | |
| | **Laboratory Location (Shenzhen)** | |
| | 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China | |
| | **Laboratory Accreditations** | |
| | A2LA: 3628.02 | CNAS: L10551 |
| | FCC: CN1284 | ISED: CN0105 |
| ☐ | **Test Site - MRT Taiwan Laboratory** | |
| | **Laboratory Location (Taiwan)** | |
| | No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) | |
| | **Laboratory Accreditations** | |
| | TAF: L3261-190725 | |
| | FCC: 291082, TW3261 | ISED: TW3261 |

## 1.4. Product Information

| | |
|---|---|
| Product Name | 5G Sub-6 GHz M.2 Module |
| Model No. | RM502Q-GL |
| Brand Name | Quectel |
| IMEI | Conducted Measurement: 355878110939501<br>Radiated Measurement: 865776040001173 |
| Operating Temperature | -30 ~ 70 °C |
| Power Type | 3.135 ~ 4.4Vdc, typical 3.7Vdc |
| UMTS Specification | |
| Single Band | Band 2, 4, 5 |
| Modulation | Uplink up to 16QAM, Downlink up to 64QAM |
| E-UTRA Specification | |
| Single Band | Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 30, 38, 41, 48, 66, 71 |
| Intra-Band | CA_2C, CA_5B, CA_7C, CA_38C, CA_41C, CA_48C, CA_66C |
| HPUE Band | Band 41 |
| Modulation | UL & DL up to 256QAM |
| 5G NR Specification | |
| SA Band | n2, n7, n5, n12, n25, n41, n66, n71, n77 |
| SA UL MIMO Band | n41, n77 |
| EN-DC Band | DC_25A_n41A, DC_26A_n41A, DC_2A_n41A, DC_66A_n41A<br>DC_4A_n41A, DC_2A_n77A, DC_7A_n77A, DC_12A_n77A,<br>DC_41A_n77A, DC_66A_n77A |
| HPUE Band | n41, n77 (SA & UL MIMO) |
| SCS for NR cell | FDD Band: 15kHz; TDD Band: 30kHz |
| Modulation | UL & DL up to 256QAM |

## 1.5. Radio Specification under Test

| | |
|---|---|
| FDD $T_X$ Frequency Range | Band 26: 814 ~ 824 MHz |
| FDD $R_X$ Frequency Range | Band 26: 859 ~ 869 MHz |

Note 1: For other features of this EUT, test report will be issued separately.

Note 2: The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Note 3: LTE band 26 transmit frequency for part 90 rule is 814 ~ 824MHz and part 22 rule is 824 ~ 849MHz. ERP over 15MHz bandwidth complies the ERP limit line of part 22 rule, therefore ERP of the partial frequency spectrum which falls within part 22 also complies.

## 1.6. Description of Available Antennas

| Technology | Frequency Range (MHz) | Antenna Type | Max Peak Gain (dBi) |
|---|---|---|---|
| LTE Band 2 | 1850 ~ 1910 | Dipole | 0.25 |
| LTE Band 4 | 1710 ~ 1755 | | 1.47 |
| LTE Band 5 | 824 ~ 849 | | 2.68 |
| LTE Band 7 | 2500 ~ 2570 | | 0.78 |
| LTE Band 12 | 699 ~ 716 | | -0.20 |
| LTE Band 13 | 777 ~ 787 | | 1.54 |
| LTE Band 14 | 788 ~ 798 | | 2.42 |
| LTE Band 17 | 704 ~ 716 | | -0.20 |
| LTE Band 25 | 1850 ~ 1915 | | 0.25 |
| LTE Band 26 | 814 ~ 849 | | 2.68 |
| LTE Band 30 | 2305 ~ 2315 | | -3.06 |
| LTE Band 38 | 2570 ~ 2620 | | 0.78 |
| LTE Band 41 | 2500 ~ 2690 | | 0.78 |
| LTE Band 48 | 3550 ~ 3700 | | -4.29 |
| LTE Band 66 | 1710 ~ 1780 | | 1.47 |
| LTE Band 71 | 663 ~ 698 | | 1.22 |

Note: All antenna information (Antenna type and Peak Gain) is provided by the manufacturer.

## 1.7. Test Methodology

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

- ANSI C63.26:2015
- FCC CFR 47 Part 90
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- FCC KDB 971168 D02 v02r01: Misc Rev Approv License Devices

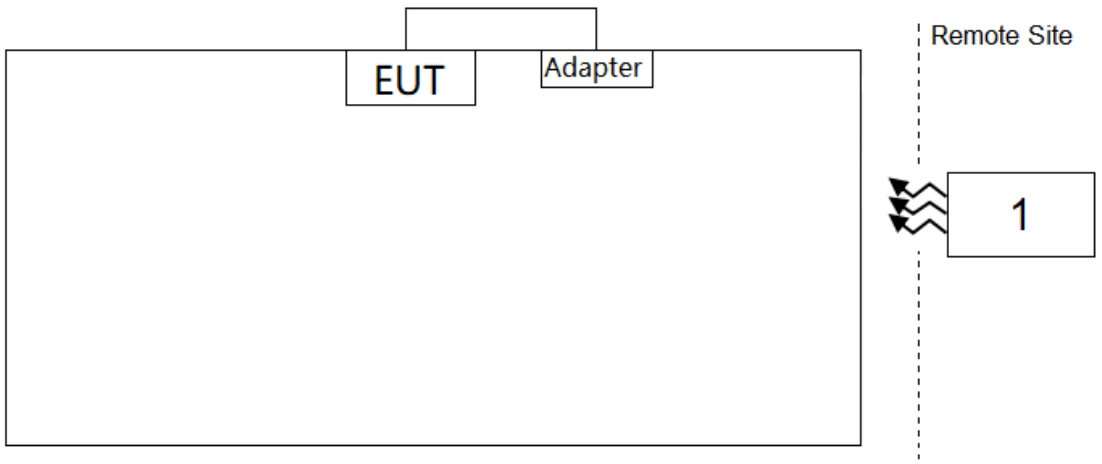
## 1.8. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

## 1.9. Maximum Power, Frequency Tolerance, and Emission Designator

| LTE Band 26 | | QPSK | | | 16QAM | | |
|---|---|---|---|---|---|---|---|
| BW (MHz) | Feq. (MHz) | Designator | Tolerance (ppm) | Max Power (W) | Designator | Tolerance (ppm) | Max Power (W) |
| 1.4 | 814.7 ~ 823.3 | 1M08G7D | - | 0.1879 | 1M08W7D | - | 0.1578 |
| 3 | 815.5 ~ 822.5 | 2M73G7D | - | 0.1945 | 2M73W7D | - | 0.1718 |
| 5 | 816.5 ~ 821.5 | 4M47G7D | - | 0.1901 | 4M46W7D | - | 0.1603 |
| 10 | 819.0 | 8M94G7D | 0.0204 | 0.1945 | 8M94W7D | - | 0.1730 |
| 15 | 821.5 | 13M4G7D | - | 0.1866 | 13M4W7D | - | 0.1641 |
| LTE Band 26 | | 64QAM | | | 256QAM | | |
| BW (MHz) | Feq. (MHz) | Designator | Tolerance (ppm) | Max Power (W) | Designator | Tolerance (ppm) | Max Power (W) |
| 1.4 | 814.7 ~ 823.3 | 1M08W7D | - | 0.1340 | 1M09W7D | - | 0.0676 |
| 3 | 815.5 ~ 822.5 | 2M72W7D | - | 0.1514 | 2M69W7D | - | 0.0743 |
| 5 | 816.5 ~ 821.5 | 4M46W7D | - | 0.1374 | 4M47W7D | - | 0.0716 |
| 10 | 819.0 | 8M94W7D | - | 0.1567 | 8M93W7D | - | 0.0766 |
| 15 | 821.5 | 13M4W7D | - | 0.1476 | 13M4W7D | - | 0.0728 |

## 1.10. Configuration of Tested System




| Product | | Manufacturer | Model No. |
|---|---|---|---|
| 1 | Wideband Radio Communication Tester | R&S | CMW 500 |

## 1.11. Test Environment Condition

| | |
|---|---|
| Ambient Temperature | 15 ~ 35°C |
| Relative Humidity | 20% ~ 75%RH |

## 2. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission (WZ-AC1)

| Instrument | Manufacturer | Type No. | Asset No. | Cali. Interval | Cali. Due Date |
|---|---|---|---|---|---|
| EMI Test Receiver | R&S | ESR7 | MRTSUE06001 | 1 year | 2021/08/01 |
| Wideband Radio Communication Tester | R&S | CMW 500 | MRTSUE06243 | 1 year | 2021/11/07 |
| PXA Signal Analyzer | Keysight | 9030B | MRTSUE06395 | 1 year | 2021/09/03 |
| Loop Antenna | Schwarzbeck | FMZB 1519 | MRTSUE06025 | 1 year | 2021/11/10 |
| Bilog Period Antenna | Schwarzbeck | VULB 9168 | MRTSUE06172 | 1 year | 2022/03/30 |
| Broad Band Horn Antenna | Schwarzbeck | BBHA 9120D | MRTSUE06023 | 1 year | 2021/10/13 |
| Broad Band Horn Antenna | Schwarzbeck | BBHA 9170 | MRTSUE06597 | 1 year | 2022/02/22 |
| Microwave System Amplifier | Agilent | 83017A | MRTSUE06076 | 1 year | 2021/11/15 |
| Preamplifier | Schwarzbeck | BBV 9721 | MRTSUE06121 | 1 year | 2021/06/11 |
| Thermohygrometer | Testo | 608-H1 | MRTSUE06403 | 1 year | 2021/08/08 |
| Anechoic Chamber | TDK | Chamber-AC1 | MRTSUE06212 | 1 year | 2022/04/29 |

Radiated Emission (WZ-AC2)

| Instrument | Manufacturer | Type No. | Asset No. | Cali. Interval | Cali. Due Date |
|---|---|---|---|---|---|
| Spectrum Analyzer | Keysight | N9038A | MRTSUE06125 | 1 year | 2021/08/01 |
| Wideband Radio Communication Tester | R&S | CMW 500 | MRTSUE06243 | 1 year | 2021/11/07 |
| Loop Antenna | Schwarzbeck | FMZB 1519 | MRTSUE06025 | 1 year | 2021/11/10 |
| Bilog Period Antenna | Schwarzbeck | VULB 9162 | MRTSUE06022 | 1 year | 2021/10/13 |
| Horn Antenna | Schwarzbeck | BBHA9120D | MRTSUE06171 | 1 year | 2021/10/27 |
| Broad Band Horn Antenna | Schwarzbeck | BBHA 9170 | MRTSUE06597 | 1 year | 2022/02/22 |
| Broad Band Coaxial Preamplifier | Schwarzbeck | BBV 9718 | MRTSUE06176 | 1 year | 2021/11/15 |
| Preamplifier | Schwarzbeck | BBV 9721 | MRTSUE06121 | 1 year | 2021/06/11 |
| Temperature/Humidity Meter | Minggao | ETH529 | MRTSUE06170 | 1 year | 2021/12/14 |
| Anechoic Chamber | RIKEN | Chamber-AC2 | MRTSUE06213 | 1 year | 2022/04/29 |

Conducted Test Equipment (WZ-SR6, WZ-TR3)

| Instrument | Manufacturer | Type No. | Asset No. | Cali. Interval | Cali. Due Date |
|---|---|---|---|---|---|
| EXA Signal Analyzer | Agilent | N9020A | MRTSUE06106 | 1 year | 2022/04/14 |
| EXA Signal Analyzer | Keysight | N9010B | MRTSUE06452 | 1 year | 2021/07/11 |
| Signal Analyzer | R&S | FSV40 | MRTSUE06218 | 1 year | 2022/04/14 |
| Wideband Radio Communication Tester | R&S | CMW 500 | MRTSUE06243 | 1 year | 2021/11/07 |
| Power Meter | Agilent | U2021XA | MRTSUE06030 | 1 year | 2021/11/17 |
| DC Power Supply | GWINSTEK | DPS-3303C | MRTSUE06064 | N/A | N/A |
| True RMS Clamp Meter | Fluke | 319 | MRTSUE06080 | 1 year | 2022/05/05 |
| Directional Coupler | Agilent | 87301D | MRTSUE06082 | 1 year | 2022/03/24 |
| Dual Directional Coupler | Agilent | 7778D | MRTSUE06083 | 1 year | 2022/03/24 |
| Attenuator | MVE | 6dB | MRTSUE06534 | 1 year | 2021/12/11 |
| Attenuator | MVE | 10dB | MRTSUE06543 | 1 year | 2021/12/11 |
| Temperature & Humidity Chamber | BAOYT | BYH-150CL | MRTSUE06051 | 1 year | 2021/11/07 |
| Thermohygrometer | testo | 608-H1 | MRTSUE06401 | 1 year | 2021/08/08 |

| Software | Version | Function |
|---|---|---|
| EMI Software | V3 | EMI Test Software |

# 3. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

| Radiated Spurious Emissions |
|---|
| Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):<br>Horizontal: 9kHz ~ 300MHz: 5.04dB<br>300MHz ~ 1GHz: 4.95dB<br>1GHz ~ 40GHz: 6.40dB<br>Vertical: 9kHz ~ 300MHz: 5.24dB<br>300MHz ~ 1GHz: 6.03dB<br>1GHz ~ 40GHz: 6.40dB |
| Conducted Spurious Emissions |
| Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):<br>0.78dB |
| Output Power |
| Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):<br>1.13dB |
| Occupied Bandwidth |
| Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):<br>0.28% |
| Frequency Stability |
| Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):<br>76.2Hz |

# 4. TEST RESULT

## 4.1. Summary

| FCC Part Section(s) | Test Description | Test Limit | Test Condition | Test Result | Reference |
|---|---|---|---|---|---|
| 2.1049 | Occupied Bandwidth | N/A | Conducted | Pass | Section 5.2 |
| 2.1055, 90.213 | Frequency Stability | < 2.5 ppm | | Pass | Section 5.3 |
| 90.635 | Conducted Output Power | < 100W | | Pass | Section 5.4 |
| 2.1051, 90.691(a) | Band Edge | < 50 + 10log10 (P[Watts]) within 37.5kHz of Block Edge | | Pass | Section 5.5, 5.6 |
| 2.1051, 90.691(a) | Spurious Emission | < 43 + 10log10 (P[Watts]) | | | |
| 2.1053, 90.691(a) | Spurious Emission | < 43 + 10log10 (P[Watts]) | Radiated | Pass | Section 5.7 |

**Notes:**

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2) All supported modulation types were evaluated. The worst-case emission of modulation was selected. Therefore, the Frequency Stability, Channel Band Edge, Radiated & Conducted Spurious Emission were presented worst-case in the test report.

## 4.2. Occupied Bandwidth Measurement

### 4.2.1.Test Limit

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured.

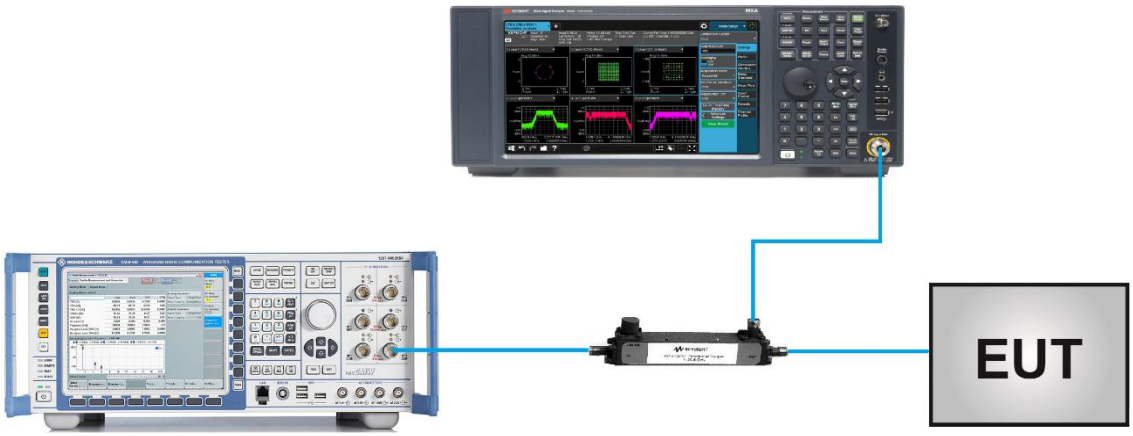
### 4.2.2.Test Procedure

ANSI C63.26-2015 - Section 5.4

### 4.2.3.Test Setting

1. Set center frequency to the nominal EUT channel center frequency
2. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

### 4.2.4.Test Setup



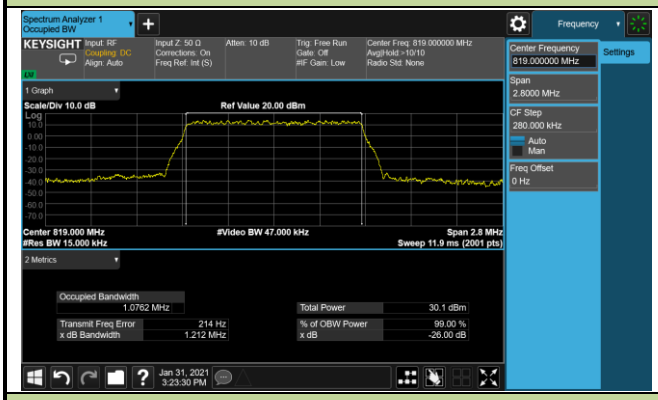
### 4.2.5.Test Result

| | | | |
|---|---|---|---|
| Product | 5G Sub-6 GHz M.2 Module | Test Site | SIP-SR5 |
| Test Engineer | Candy Luo | Test Date | 2021/01/31 ~ 2021/04/12 |
| Test Band | LTE Band 26 | | |

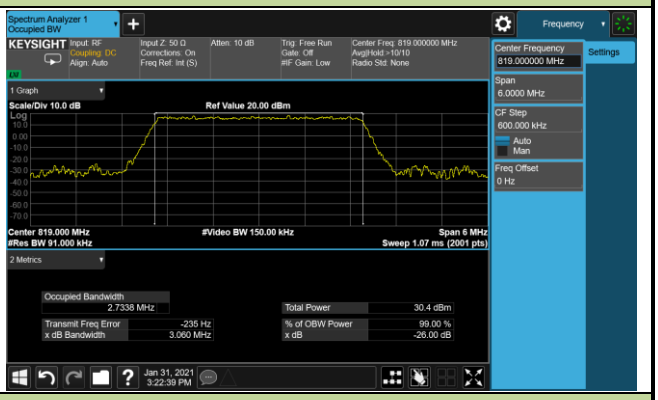
| Modulation | Frequency (MHz) | Bandwidth (MHz) | 99% Bandwidth (MHz) |
|---|---|---|---|
| QPSK | 819.0 | 1.4 | 1.08 |
| | | 3 | 2.73 |
| | | 5 | 4.47 |
| | | 10 | 8.94 |
| 16QAM | 819.0 | 1.4 | 1.08 |
| | | 3 | 2.73 |
| | | 5 | 4.47 |
| | | 10 | 8.95 |
| 64QAM | 819.0 | 1.4 | 1.08 |
| | | 3 | 2.72 |
| | | 5 | 4.46 |
| | | 10 | 8.94 |
| 256QAM | 819.0 | 1.4 | 1.09 |
| | | 3 | 2.69 |
| | | 5 | 4.47 |
| | | 10 | 8.93 |
| QPSK | 821.5 | 15 | 13.38 |
| 16QAM | | | 13.40 |
| 64QAM | | | 13.41 |
| 256QAM | | | 13.40 |

## 99% Bandwidth - QPSK

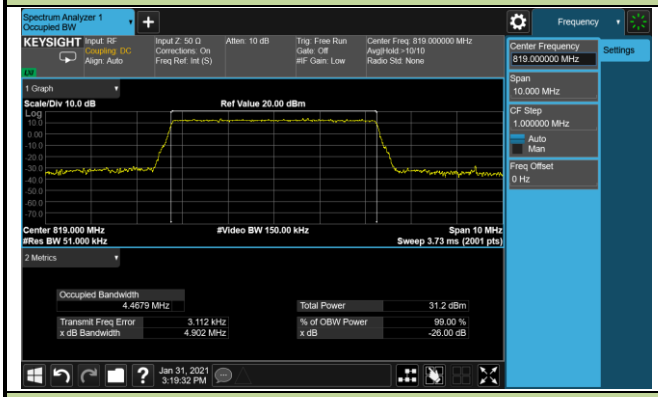
### 1.4MHz Channel Bandwidth



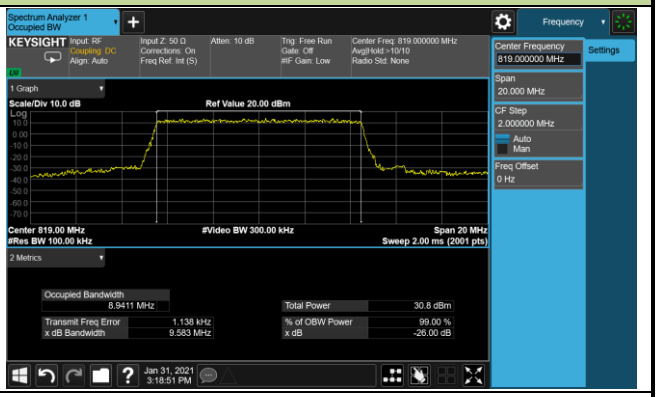

### 3MHz Channel Bandwidth



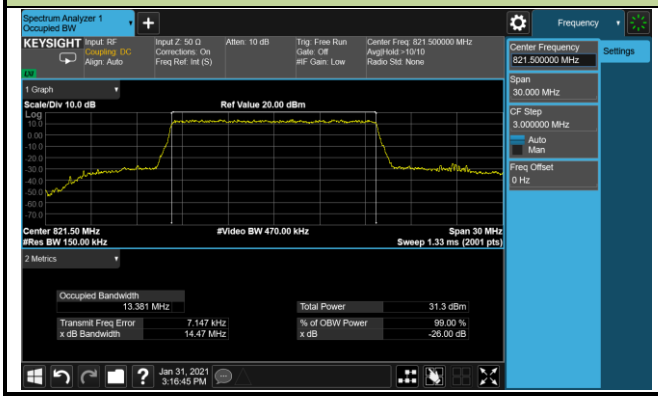

### 5MHz Channel Bandwidth




### 10MHz Channel Bandwidth

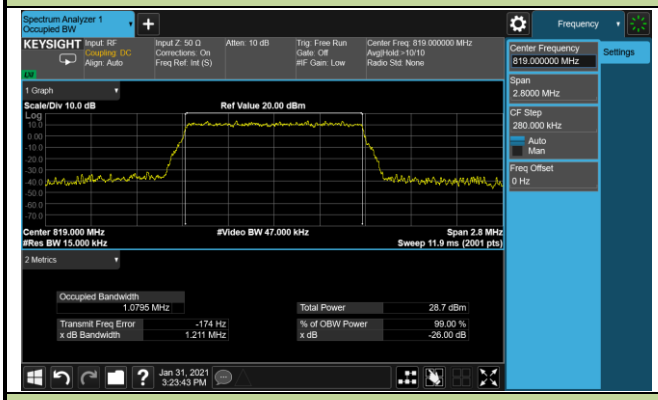



### 15MHz Channel Bandwidth

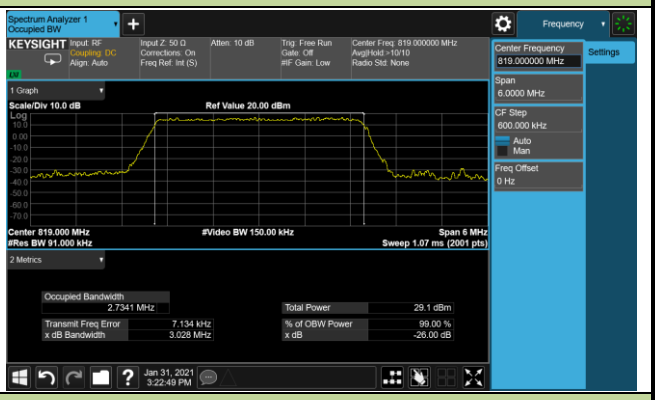


## 99% Bandwidth - 16QAM

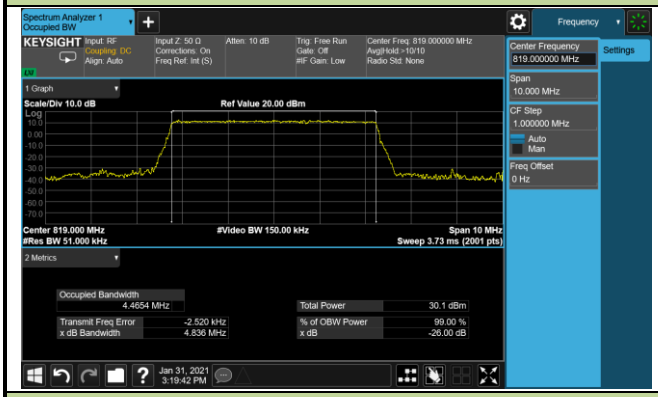
### 1.4MHz Channel Bandwidth



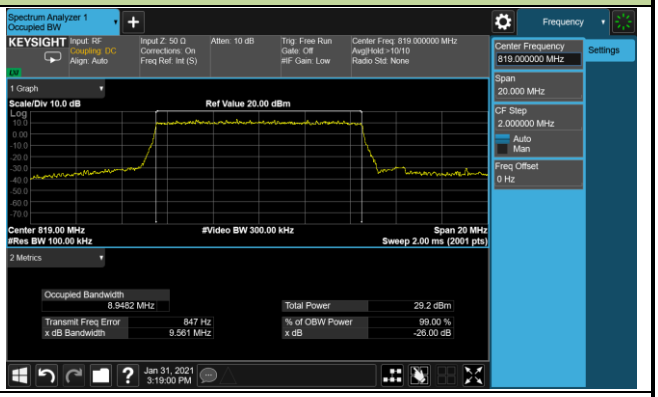

### 3MHz Channel Bandwidth



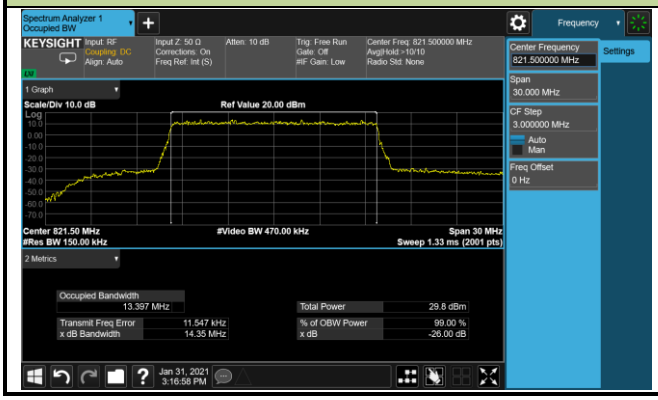

### 5MHz Channel Bandwidth




### 10MHz Channel Bandwidth

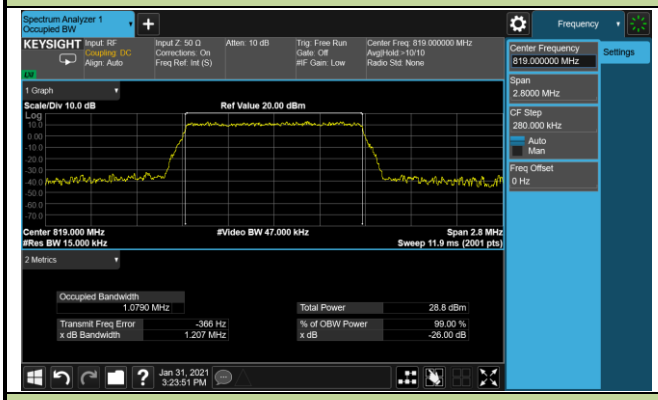



### 15MHz Channel Bandwidth

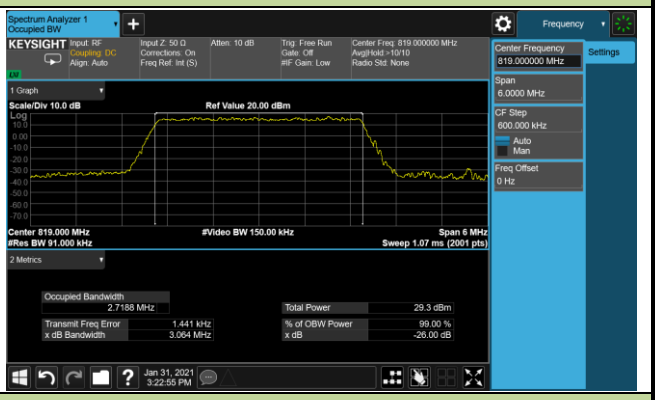


## 99% Bandwidth - 64QAM

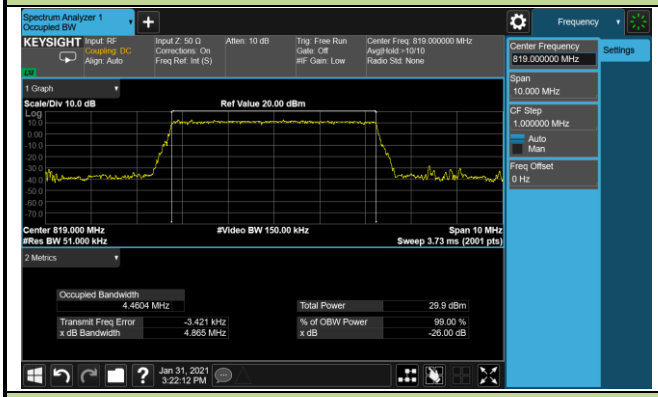
### 1.4MHz Channel Bandwidth



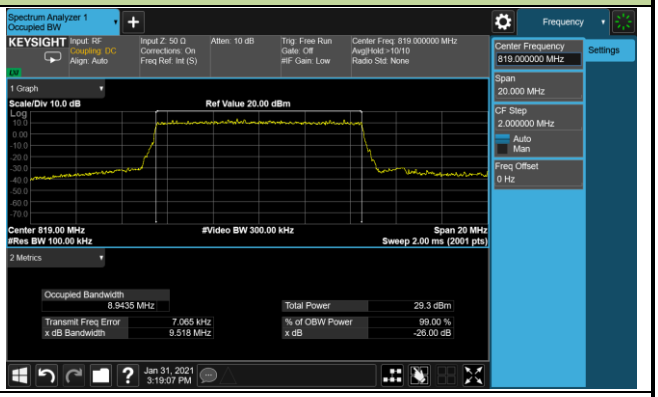

### 3MHz Channel Bandwidth



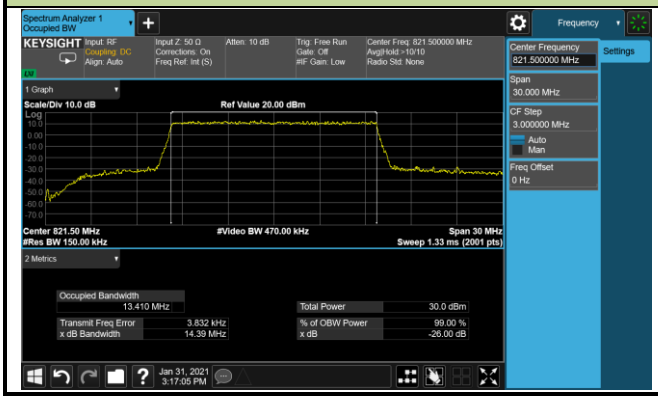

### 5MHz Channel Bandwidth




### 10MHz Channel Bandwidth

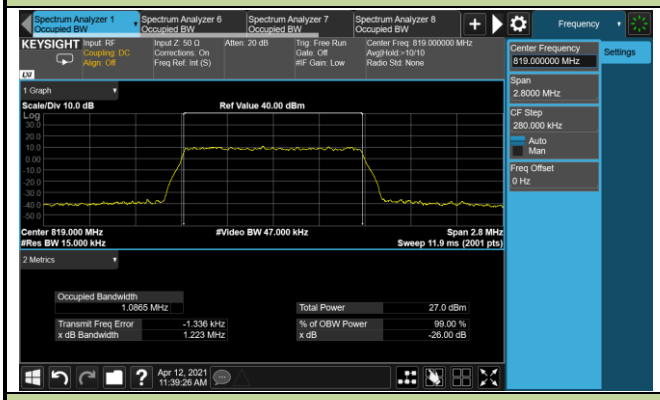



### 15MHz Channel Bandwidth

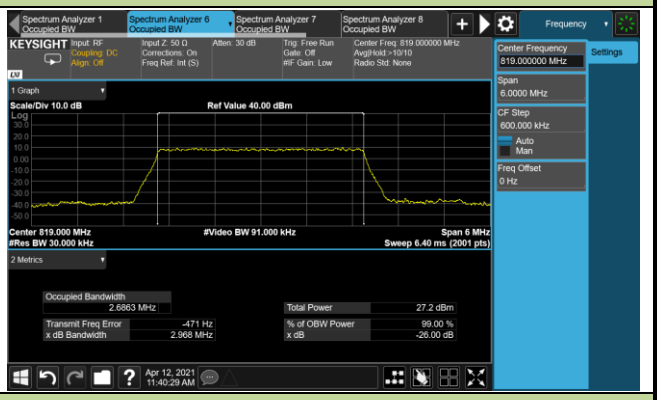


## 99% Bandwidth - 256QAM

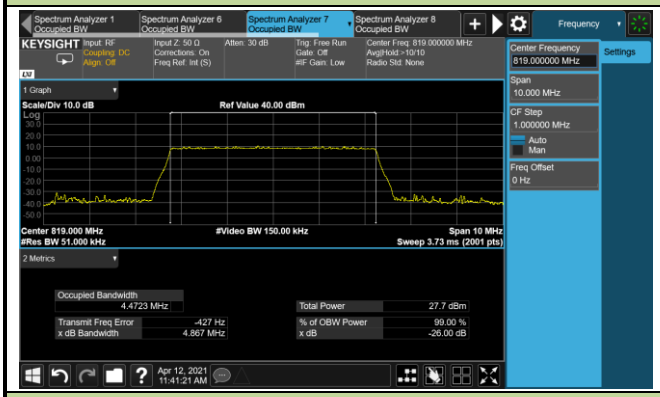
### 1.4MHz Channel Bandwidth



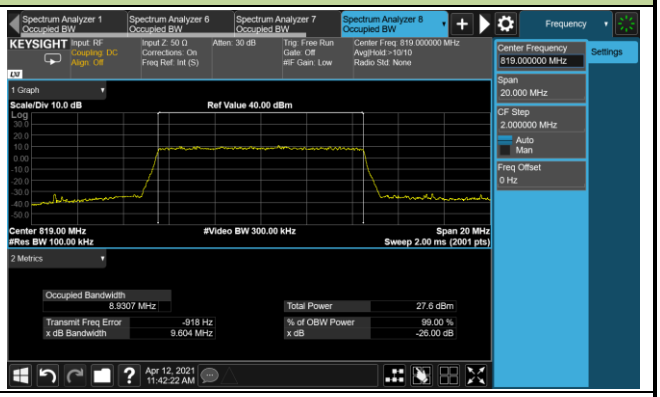

### 3MHz Channel Bandwidth




### 5MHz Channel Bandwidth




### 10MHz Channel Bandwidth




### 15MHz Channel Bandwidth

## 4.3. Frequency Stability Measurement

### 4.3.1.Test Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

### 4.3.2.Test Procedure

ANSI C63.26-2015 - Section 5.6

### 4.3.3.Test Setting

**Frequency Stability Under Temperature Variations:**

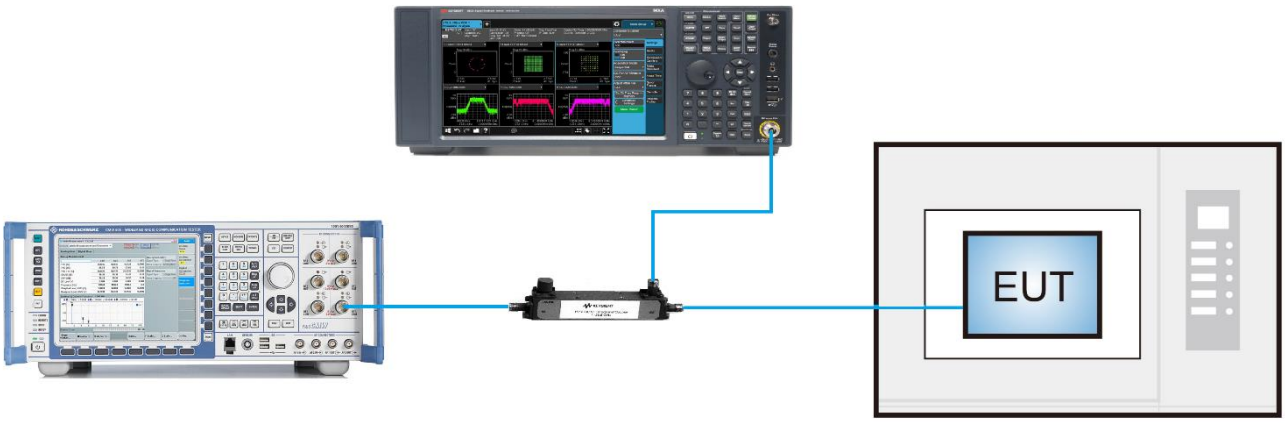
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

**Frequency Stability Under Voltage Variations:**

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, recordthe maximum frequency change.

### 4.3.4.Test Setup



### 4.3.5.Test Result

| | | | |
|---|---|---|---|
| Product | 5G Sub-6 GHz M.2 Module | Test Site | SIP-TR1 |
| Test Engineer | Candy Luo | Test Date | 2021/01/31 |
| Test Band | LTE Band 26_QPSK | | |

| Power (Vdc) | Temp. (°C) | Frequency Tolerance (ppm) |
|---|---|---|
| 3.7 | - 30 | 0.0079 |
| | - 20 | -0.0073 |
| | - 10 | -0.0091 |
| | 0 | -0.0008 |
| | + 10 | 0.0149 |
| | + 20 (Ref) | -0.0010 |
| | + 30 | 0.0014 |
| | + 40 | -0.0103 |
| | + 50 | 0.0204 |
| 4.4 | + 20 | -0.0147 |
| 3.135 | + 20 | 0.0093 |

## 4.4. Conducted Output Power Measurement

### 4.4.1.Test Limit

The maximum output power of the transmitter for mobile stations is 100 watts (20dBw).

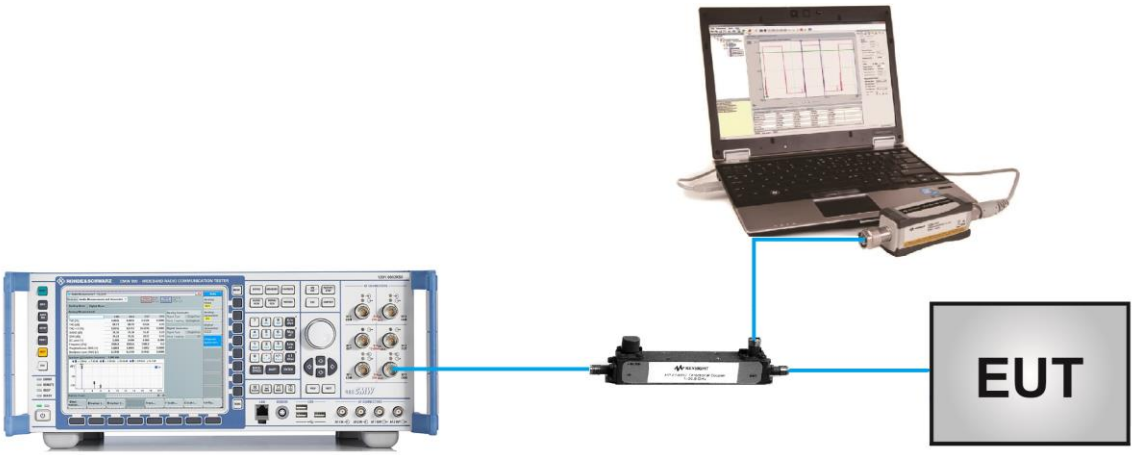
### 4.4.2.Test Procedure

ANSI C63.26-2015 - Section 5.2

### 4.4.3.Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

### 4.4.4.Test Setup



### 4.4.5.Test Result

| | | | |
|---|---|---|---|
| Product | 5G Sub-6 GHz M.2 Module | Test Site | SIP-SR5 |
| Test Engineer | Candy Luo | Test Date | 2021/01/31 |
| Test Band | LTE Band 26 | | |

| Channel No. | Frequency (MHz) | Channel Bandwidth (MHz) | RB Size | RB Offset | Output Power (dBm) | Output Power (W) | Limit (W) |
|---|---|---|---|---|---|---|---|
| QPSK | | | | | | | |
| 26697 | 814.7 | 1.4 | 1 | 0 | 22.74 | 0.1879 | < 100 |
| 26740 | 819.0 | | | | 22.60 | 0.1820 | < 100 |
| 26783 | 823.3 | | | | 22.46 | 0.1762 | < 100 |
| 26697 | 814.7 | 1.4 | 1 | 2 | 22.67 | 0.1849 | < 100 |
| 26740 | 819.0 | | | | 22.67 | 0.1849 | < 100 |
| 26783 | 823.3 | | | | 22.60 | 0.1820 | < 100 |
| 26697 | 814.7 | 1.4 | 1 | 6 | 22.59 | 0.1816 | < 100 |
| 26740 | 819.0 | | | | 22.58 | 0.1811 | < 100 |
| 26783 | 823.3 | | | | 22.57 | 0.1807 | < 100 |
| 26697 | 814.7 | 1.4 | 6 | 0 | 21.62 | 0.1452 | < 100 |
| 26740 | 819.0 | | | | 21.63 | 0.1455 | < 100 |
| 26783 | 823.3 | | | | 21.50 | 0.1413 | < 100 |
| 26705 | 815.5 | 3 | 1 | 0 | 22.89 | 0.1945 | < 100 |
| 26740 | 819.0 | | | | 22.64 | 0.1837 | < 100 |
| 26775 | 822.5 | | | | 22.63 | 0.1832 | < 100 |
| 26705 | 815.5 | 3 | 1 | 7 | 22.72 | 0.1871 | < 100 |
| 26740 | 819.0 | | | | 22.80 | 0.1905 | < 100 |
| 26775 | 822.5 | | | | 22.70 | 0.1862 | < 100 |
| 26705 | 815.5 | 3 | 1 | 14 | 22.64 | 0.1837 | < 100 |
| 26740 | 819.0 | | | | 22.57 | 0.1807 | < 100 |
| 26775 | 822.5 | | | | 22.55 | 0.1799 | < 100 |
| 26705 | 815.5 | 3 | 15 | 0 | 21.70 | 0.1479 | < 100 |
| 26740 | 819.0 | | | | 21.71 | 0.1483 | < 100 |
| 26775 | 822.5 | | | | 21.72 | 0.1486 | < 100 |

| Channel No. | Frequency (MHz) | Channel Bandwidth (MHz) | RB Size | RB Offset | Output Power (dBm) | Output Power (W) | Limit (W) |
|---|---|---|---|---|---|---|---|
| QPSK | | | | | | | |
| 26715 | 816.5 | 5 | 1 | 0 | 22.79 | 0.1901 | < 100 |
| 26740 | 819.0 | | | | 22.76 | 0.1888 | < 100 |
| 26765 | 821.5 | | | | 22.64 | 0.1837 | < 100 |
| 26715 | 816.5 | 5 | 1 | 12 | 22.70 | 0.1862 | < 100 |
| 26740 | 819.0 | | | | 22.74 | 0.1879 | < 100 |
| 26765 | 821.5 | | | | 22.69 | 0.1858 | < 100 |
| 26715 | 816.5 | 5 | 1 | 24 | 22.78 | 0.1897 | < 100 |
| 26740 | 819.0 | | | | 22.64 | 0.1837 | < 100 |
| 26765 | 821.5 | | | | 22.50 | 0.1778 | < 100 |
| 26715 | 816.5 | 5 | 25 | 0 | 21.68 | 0.1472 | < 100 |
| 26740 | 819.0 | | | | 21.64 | 0.1459 | < 100 |
| 26765 | 821.5 | | | | 21.65 | 0.1462 | < 100 |
| 26740 | 819.0 | 10 | 1 | 0 | 22.89 | 0.1945 | < 100 |
| | | | 1 | 24 | 22.67 | 0.1849 | < 100 |
| | | | 1 | 49 | 22.60 | 0.1820 | < 100 |
| | | | 50 | 0 | 21.76 | 0.1500 | < 100 |
| 26765 | 821.5 | 15 | 1 | 0 | 22.71 | 0.1866 | < 100 |
| | | | 1 | 36 | 22.34 | 0.1714 | < 100 |
| | | | 1 | 74 | 22.40 | 0.1738 | < 100 |
| | | | 75 | 0 | 21.63 | 0.1455 | < 100 |

| Channel No. | Frequency (MHz) | Channel Bandwidth (MHz) | RB Size | RB Offset | Output Power (dBm) | Output Power (W) | Limit (W) |
|---|---|---|---|---|---|---|---|
| 16QAM | | | | | | | |
| 26697 | 814.7 | 1.4 | 1 | 0 | 21.92 | 0.1556 | < 100 |
| 26740 | 819.0 | | | | 21.95 | 0.1567 | < 100 |
| 26783 | 823.3 | | | | 21.78 | 0.1507 | < 100 |
| 26697 | 814.7 | 1.4 | 1 | 2 | 21.98 | 0.1578 | < 100 |
| 26740 | 819.0 | | | | 21.80 | 0.1514 | < 100 |
| 26783 | 823.3 | | | | 21.84 | 0.1528 | < 100 |
| 26697 | 814.7 | 1.4 | 1 | 6 | 21.91 | 0.1552 | < 100 |
| 26740 | 819.0 | | | | 21.82 | 0.1521 | < 100 |
| 26783 | 823.3 | | | | 21.64 | 0.1459 | < 100 |
| 26697 | 814.7 | 1.4 | 6 | 0 | 20.76 | 0.1191 | < 100 |
| 26740 | 819.0 | | | | 20.64 | 0.1159 | < 100 |
| 26783 | 823.3 | | | | 20.54 | 0.1132 | < 100 |
| 26705 | 815.5 | 3 | 1 | 0 | 22.01 | 0.1589 | < 100 |
| 26740 | 819.0 | | | | 21.97 | 0.1574 | < 100 |
| 26775 | 822.5 | | | | 22.33 | 0.1710 | < 100 |
| 26705 | 815.5 | 3 | 1 | 7 | 22.11 | 0.1626 | < 100 |
| 26740 | 819.0 | | | | 21.95 | 0.1567 | < 100 |
| 26775 | 822.5 | | | | 22.21 | 0.1663 | < 100 |
| 26705 | 815.5 | 3 | 1 | 14 | 21.97 | 0.1574 | < 100 |
| 26740 | 819.0 | | | | 22.35 | 0.1718 | < 100 |
| 26775 | 822.5 | | | | 21.85 | 0.1531 | < 100 |
| 26705 | 815.5 | 3 | 15 | 0 | 20.82 | 0.1208 | < 100 |
| 26740 | 819.0 | | | | 20.80 | 0.1202 | < 100 |
| 26775 | 822.5 | | | | 20.61 | 0.1151 | < 100 |

| Channel No. | Frequency (MHz) | Channel Bandwidth (MHz) | RB Size | RB Offset | Output Power (dBm) | Output Power (W) | Limit (W) |
|---|---|---|---|---|---|---|---|
| 16QAM | | | | | | | |
| 26715 | 816.5 | 5 | 1 | 0 | 22.05 | 0.1603 | < 100 |
| 26740 | 819.0 | | | | 21.97 | 0.1574 | < 100 |
| 26765 | 821.5 | | | | 21.73 | 0.1489 | < 100 |
| 26715 | 816.5 | 5 | 1 | 12 | 21.95 | 0.1567 | < 100 |
| 26740 | 819.0 | | | | 21.97 | 0.1574 | < 100 |
| 26765 | 821.5 | | | | 21.77 | 0.1503 | < 100 |
| 26715 | 816.5 | 5 | 1 | 24 | 21.98 | 0.1578 | < 100 |
| 26740 | 819.0 | | | | 21.91 | 0.1552 | < 100 |
| 26765 | 821.5 | | | | 21.72 | 0.1486 | < 100 |
| 26715 | 816.5 | 5 | 25 | 0 | 20.79 | 0.1199 | < 100 |
| 26740 | 819.0 | | | | 20.63 | 0.1156 | < 100 |
| 26765 | 821.5 | | | | 20.72 | 0.1180 | < 100 |
| 26740 | 819.0 | 10 | 1 | 0 | 22.38 | 0.1730 | < 100 |
| | | | 1 | 24 | 22.09 | 0.1618 | < 100 |
| | | | 1 | 49 | 22.05 | 0.1603 | < 100 |
| | | | 50 | 0 | 20.75 | 0.1189 | < 100 |
| 26765 | 821.5 | 15 | 1 | 0 | 22.10 | 0.1622 | < 100 |
| | | | 1 | 36 | 21.97 | 0.1574 | < 100 |
| | | | 1 | 74 | 22.15 | 0.1641 | < 100 |
| | | | 75 | 0 | 20.73 | 0.1183 | < 100 |

| Channel No. | Frequency (MHz) | Channel Bandwidth (MHz) | RB Size | RB Offset | Output Power (dBm) | Output Power (W) | Limit (W) |
|---|---|---|---|---|---|---|---|
| 64QAM | | | | | | | |
| 26697 | 814.7 | 1.4 | 1 | 0 | 21.26 | 21.79 | < 100 |
| 26740 | 819.0 | | | | 20.57 | 21.10 | < 100 |
| 26783 | 823.3 | | | | 21.14 | 21.67 | < 100 |
| 26697 | 814.7 | 1.4 | 1 | 2 | 21.23 | 21.76 | < 100 |
| 26740 | 819.0 | | | | 20.94 | 21.47 | < 100 |
| 26783 | 823.3 | | | | 21.10 | 21.63 | < 100 |
| 26697 | 814.7 | 1.4 | 1 | 6 | 21.27 | 21.80 | < 100 |
| 26740 | 819.0 | | | | 20.93 | 21.46 | < 100 |
| 26783 | 823.3 | | | | 21.11 | 21.64 | < 100 |
| 26697 | 814.7 | 1.4 | 6 | 0 | 20.46 | 20.99 | < 100 |
| 26740 | 819.0 | | | | 20.12 | 20.65 | < 100 |
| 26783 | 823.3 | | | | 20.21 | 20.74 | < 100 |
| 26705 | 815.5 | 3 | 1 | 0 | 21.48 | 22.01 | < 100 |
| 26740 | 819.0 | | | | 20.79 | 21.32 | < 100 |
| 26775 | 822.5 | | | | 21.75 | 22.28 | < 100 |
| 26705 | 815.5 | 3 | 1 | 7 | 21.13 | 21.66 | < 100 |
| 26740 | 819.0 | | | | 20.75 | 21.28 | < 100 |
| 26775 | 822.5 | | | | 21.80 | 22.33 | < 100 |
| 26705 | 815.5 | 3 | 1 | 14 | 21.17 | 21.70 | < 100 |
| 26740 | 819.0 | | | | 20.74 | 21.27 | < 100 |
| 26775 | 822.5 | | | | 21.80 | 22.33 | < 100 |
| 26705 | 815.5 | 3 | 15 | 0 | 20.41 | 20.94 | < 100 |
| 26740 | 819.0 | | | | 20.24 | 20.77 | < 100 |
| 26775 | 822.5 | | | | 20.21 | 20.74 | < 100 |

| Channel No. | Frequency (MHz) | Channel Bandwidth (MHz) | RB Size | RB Offset | Output Power (dBm) | Output Power (W) | Limit (W) |
|---|---|---|---|---|---|---|---|
| 64QAM | | | | | | | |
| 26715 | 816.5 | 5 | 1 | 0 | 21.10 | 21.63 | < 100 |
| 26740 | 819.0 | | | | 21.03 | 21.56 | < 100 |
| 26765 | 821.5 | | | | 21.33 | 21.86 | < 100 |
| 26715 | 816.5 | 5 | 1 | 12 | 21.09 | 21.62 | < 100 |
| 26740 | 819.0 | | | | 21.04 | 21.57 | < 100 |
| 26765 | 821.5 | | | | 21.36 | 21.89 | < 100 |
| 26715 | 816.5 | 5 | 1 | 24 | 20.98 | 21.51 | < 100 |
| 26740 | 819.0 | | | | 21.32 | 21.85 | < 100 |
| 26765 | 821.5 | | | | 21.37 | 21.90 | < 100 |
| 26715 | 816.5 | 5 | 25 | 0 | 20.13 | 20.66 | < 100 |
| 26740 | 819.0 | | | | 20.13 | 20.66 | < 100 |
| 26765 | 821.5 | | | | 21.38 | 21.91 | < 100 |
| 26740 | 819.0 | 10 | 1 | 0 | 21.95 | 22.48 | < 100 |
| | | | 1 | 24 | 21.90 | 22.43 | < 100 |
| | | | 1 | 49 | 21.83 | 22.36 | < 100 |
| | | | 50 | 0 | 20.26 | 20.79 | < 100 |
| 26765 | 821.5 | 15 | 1 | 0 | 21.41 | 21.94 | < 100 |
| | | | 1 | 36 | 21.68 | 22.21 | < 100 |
| | | | 1 | 74 | 21.69 | 22.22 | < 100 |
| | | | 75 | 0 | 20.23 | 20.76 | < 100 |

| Channel No. | Frequency (MHz) | Channel Bandwidth (MHz) | RB Size | RB Offset | Output Power (dBm) | Output Power (W) | Limit (W) |
|---|---|---|---|---|---|---|---|
| 256QAM | | | | | | | |
| 26697 | 814.7 | 1.4 | 1 | 0 | 18.12 | 18.65 | < 100 |
| 26740 | 819.0 | | | | 17.99 | 18.52 | < 100 |
| 26783 | 823.3 | | | | 17.90 | 18.43 | < 100 |
| 26697 | 814.7 | 1.4 | 1 | 2 | 18.12 | 18.65 | < 100 |
| 26740 | 819.0 | | | | 18.00 | 18.53 | < 100 |
| 26783 | 823.3 | | | | 18.01 | 18.54 | < 100 |
| 26697 | 814.7 | 1.4 | 1 | 6 | 18.07 | 18.60 | < 100 |
| 26740 | 819.0 | | | | 18.22 | 18.75 | < 100 |
| 26783 | 823.3 | | | | 17.99 | 18.52 | < 100 |
| 26697 | 814.7 | 1.4 | 6 | 0 | 18.30 | 18.83 | < 100 |
| 26740 | 819.0 | | | | 18.06 | 18.59 | < 100 |
| 26783 | 823.3 | | | | 18.17 | 18.70 | < 100 |
| 26705 | 815.5 | 3 | 1 | 0 | 18.13 | 18.66 | < 100 |
| 26740 | 819.0 | | | | 18.28 | 18.81 | < 100 |
| 26775 | 822.5 | | | | 18.60 | 19.13 | < 100 |
| 26705 | 815.5 | 3 | 1 | 7 | 18.16 | 18.69 | < 100 |
| 26740 | 819.0 | | | | 18.31 | 18.84 | < 100 |
| 26775 | 822.5 | | | | 18.71 | 19.24 | < 100 |
| 26705 | 815.5 | 3 | 1 | 14 | 18.00 | 18.53 | < 100 |
| 26740 | 819.0 | | | | 18.19 | 18.72 | < 100 |
| 26775 | 822.5 | | | | 18.57 | 19.10 | < 100 |
| 26705 | 815.5 | 3 | 15 | 0 | 18.38 | 18.91 | < 100 |
| 26740 | 819.0 | | | | 18.34 | 18.87 | < 100 |
| 26775 | 822.5 | | | | 18.21 | 18.74 | < 100 |

| Channel No. | Frequency (MHz) | Channel Bandwidth (MHz) | RB Size | RB Offset | Output Power (dBm) | Output Power (W) | Limit (W) |
|---|---|---|---|---|---|---|---|
| 256QAM | | | | | | | |
| 26715 | 816.5 | 5 | 1 | 0 | 18.55 | 19.08 | < 100 |
| 26740 | 819.0 | | | | 18.51 | 19.04 | < 100 |
| 26765 | 821.5 | | | | 18.26 | 18.79 | < 100 |
| 26715 | 816.5 | 5 | 1 | 12 | 18.48 | 19.01 | < 100 |
| 26740 | 819.0 | | | | 18.47 | 19.00 | < 100 |
| 26765 | 821.5 | | | | 18.41 | 18.94 | < 100 |
| 26715 | 816.5 | 5 | 1 | 24 | 18.33 | 18.86 | < 100 |
| 26740 | 819.0 | | | | 18.36 | 18.89 | < 100 |
| 26765 | 821.5 | | | | 18.36 | 18.89 | < 100 |
| 26715 | 816.5 | 5 | 25 | 0 | 18.32 | 18.85 | < 100 |
| 26740 | 819.0 | | | | 18.26 | 18.79 | < 100 |
| 26765 | 821.5 | | | | 18.23 | 18.76 | < 100 |
| 26740 | 819.0 | 10 | 1 | 0 | 18.84 | 19.37 | < 100 |
| | | | 1 | 24 | 18.61 | 19.14 | < 100 |
| | | | 1 | 49 | 18.84 | 19.37 | < 100 |
| | | | 50 | 0 | 18.29 | 18.82 | < 100 |
| 26765 | 821.5 | 15 | 1 | 0 | 18.46 | 18.99 | < 100 |
| | | | 1 | 36 | 18.55 | 19.08 | < 100 |
| | | | 1 | 74 | 18.62 | 19.15 | < 100 |
| | | | 75 | 0 | 18.25 | 18.78 | < 100 |

## 4.5. Band Edge Measurement

### 4.5.1.Test Limit

Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log(f/6.1) decibels or 50 + 10 Log(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

### 4.5.2.Test Procedure

ANSI C63.26-2015 - Section 5.7

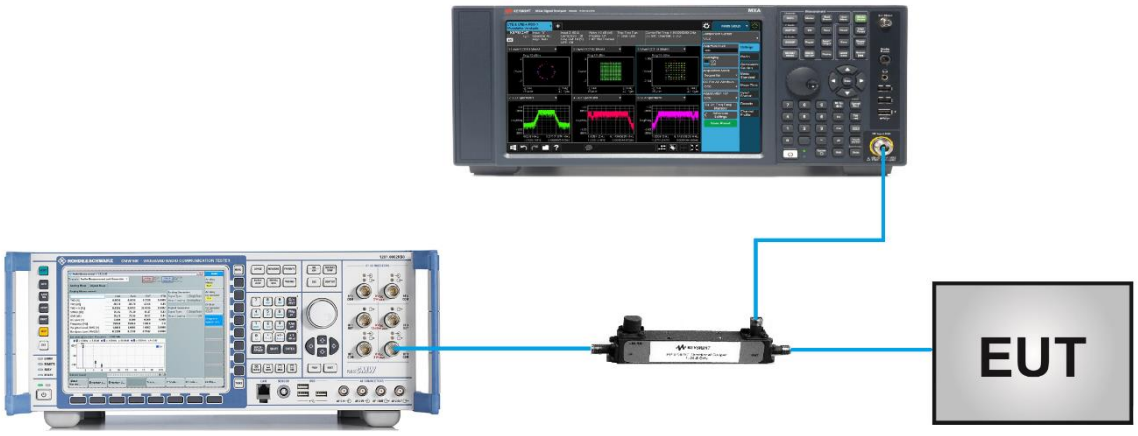
### 4.5.3.Test Setting

1. Set the analyzer frequency to low or high channel
2. RBW ≥ The nominal RBW shall be in the range of 1% of the anticipated OBW (in the 1MHz band immediately outside and adjacent to the band edge). For improvement of the accuracy in the measurement of the average power of a noise-like emission, a RBW narrower than the specified reference bandwidth can be used (generally limited to no less than 1% of the OBW), provided that a subsequent integration is performed over the full required measurement bandwidth. This integration should be performed using the spectrum analyzer’s band power functions.
3. VBW ≥ 3*RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to “free run.”
7. User gate triggered such that the analyzer only sweeps when the device is transmitting at full

power

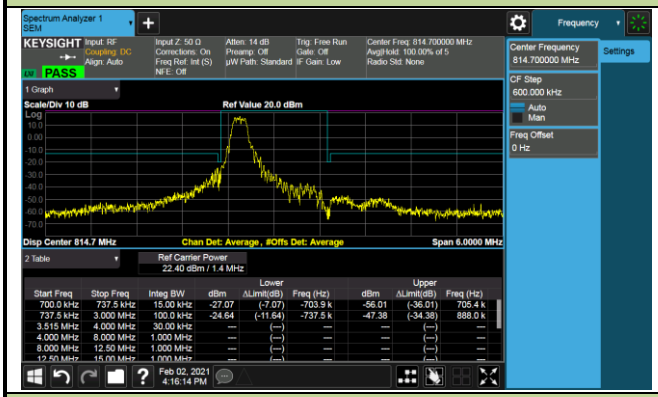
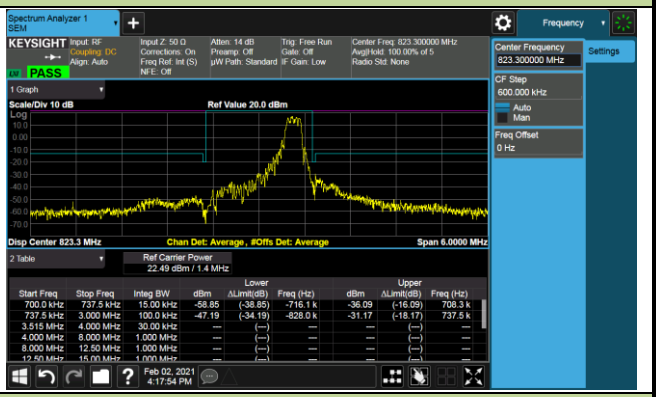
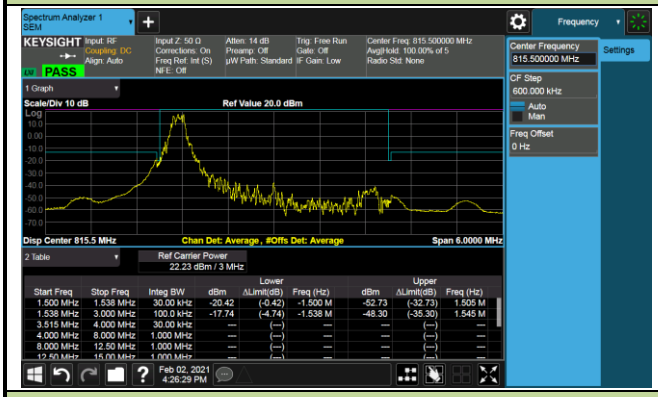
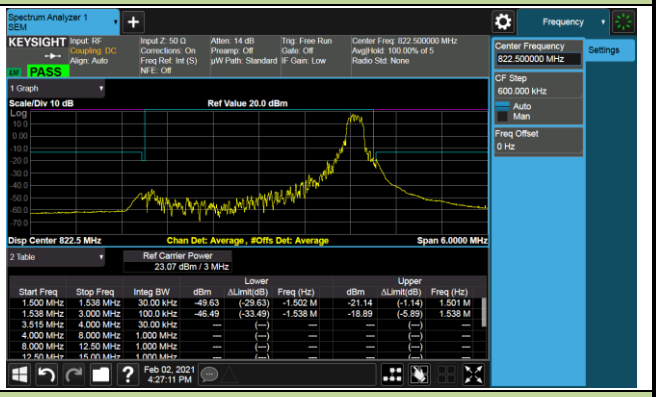
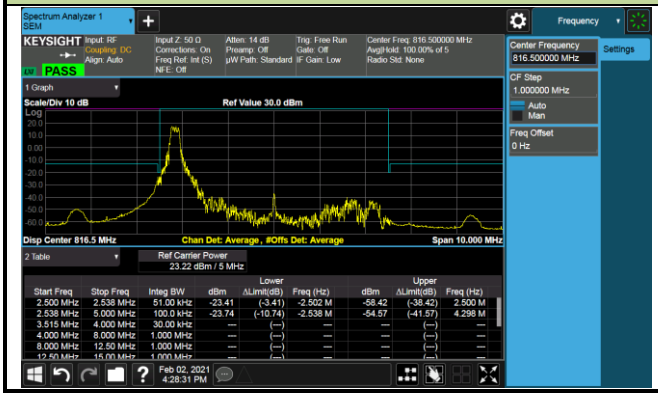
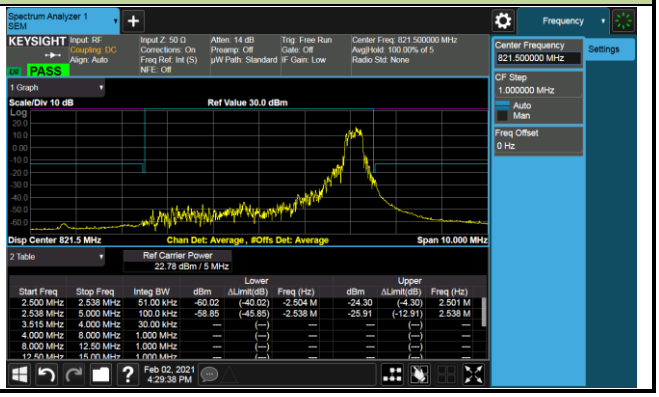
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

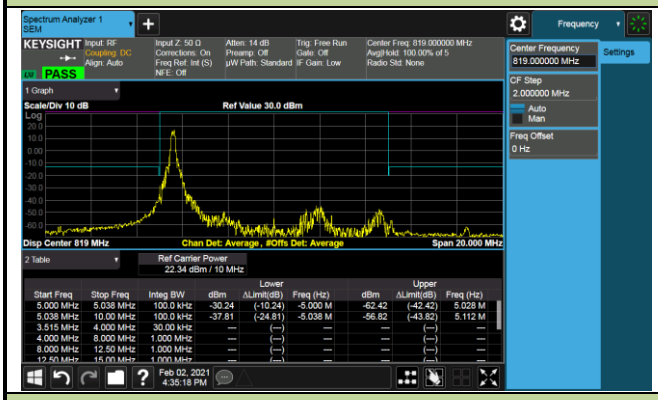
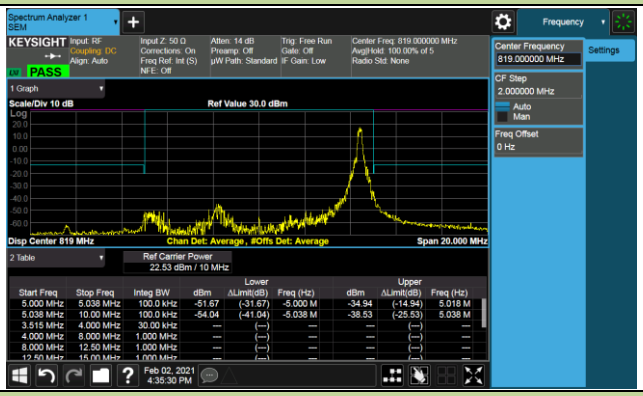
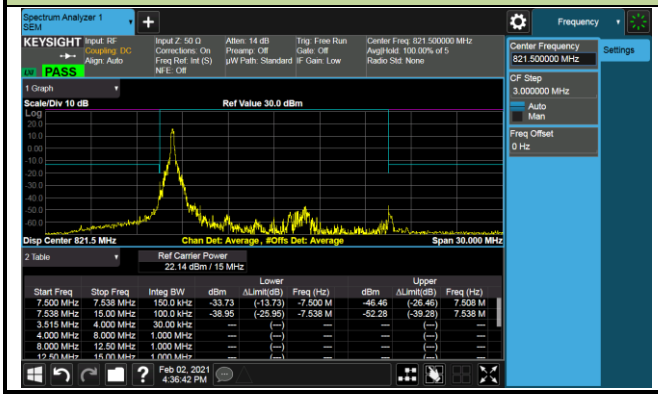
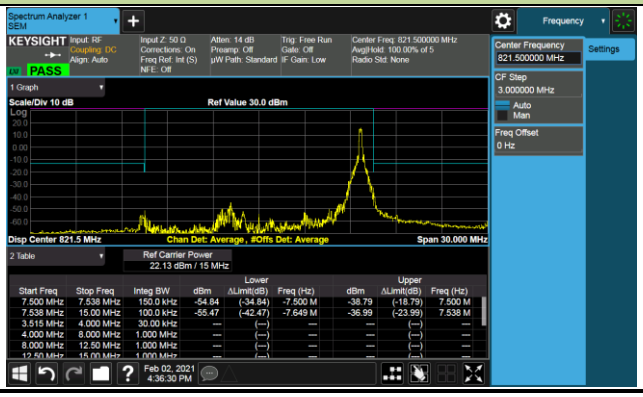
### 4.5.4.Test Setup



### 4.5.5.Test Result

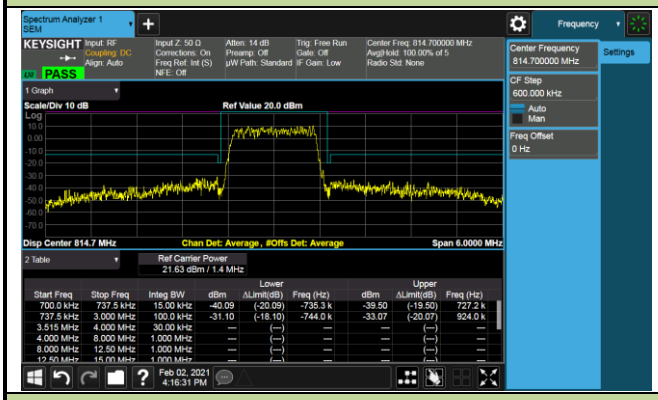
| | | | |
|---|---|---|---|
| Product | 5G Sub-6 GHz M.2 Module | Test Site | SIP-SR5 |
| Test Engineer | Candy Luo | Test Date | 2021/02/02 |
| Test Band | LTE Band 26_QPSK | | |

| 1.4MHz Channel Bandwidth - 1RB | |
|---|---|
| Lower Band Edge | Upper Band Edge |
|  |  |
| 3MHz Channel Bandwidth - 1RB | |
| Lower Band Edge | Upper Band Edge |
|  |  |
| 5MHz Channel Bandwidth - 1RB | |
| Lower Band Edge | Upper Band Edge |
|  |  |

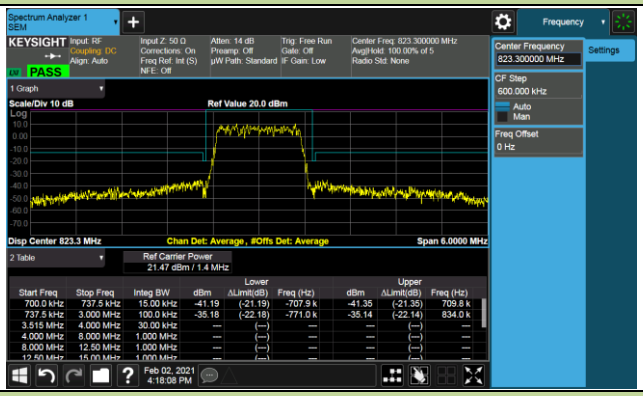
| 10MHz Channel Bandwidth - 1RB | |
|---|---|
| Lower Band Edge | Upper Band Edge |
|  |  |
| **15MHz Channel Bandwidth - 1RB** | |
| Lower Band Edge | Upper Band Edge |
|  |  |

## 1.4MHz Channel Bandwidth - Full RB

### Lower Band Edge

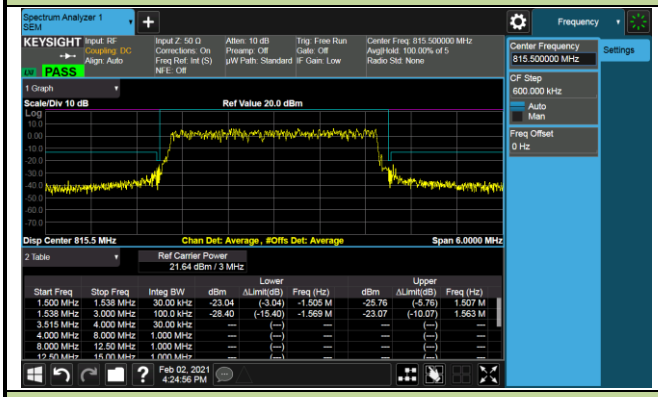



### Upper Band Edge

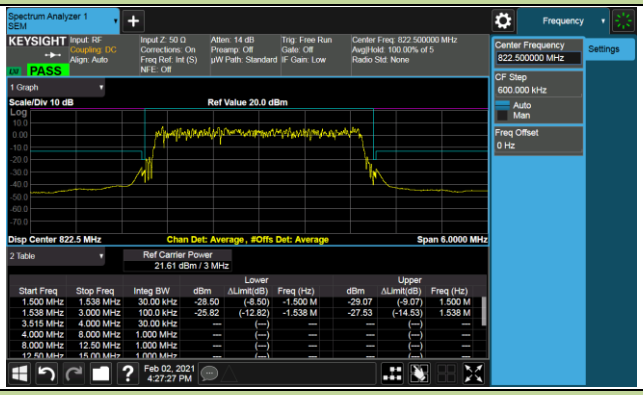



## 3MHz Channel Bandwidth - Full RB

### Lower Band Edge



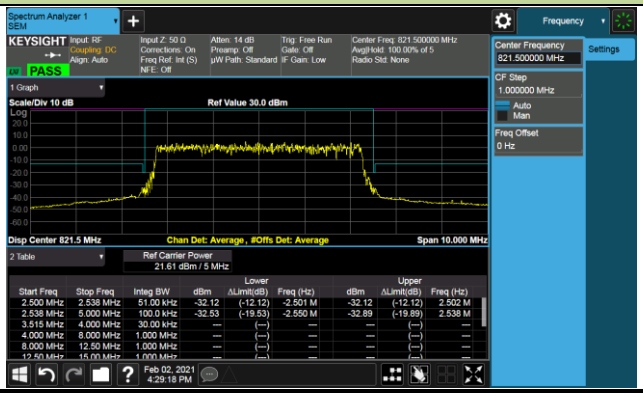

### Upper Band Edge




## 5MHz Channel Bandwidth - Full RB

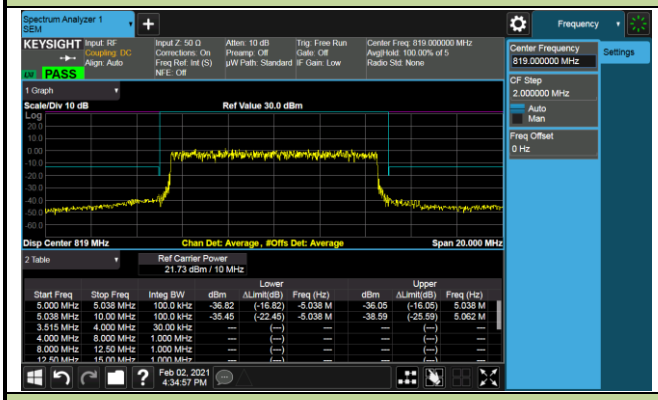
### Lower Band Edge

### Upper Band Edge



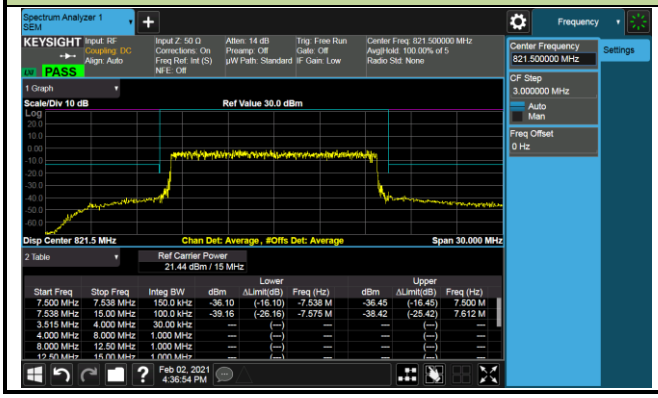
## 10MHz Channel Bandwidth - Full RB

### Band Edge




## 15MHz Channel Bandwidth - Full RB

### Band Edge



## 4.6. Conducted Spurious Emission Measurement

### 4.6.1.Test Limit

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10$^{th}$ harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.

For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

### 4.6.2.Test Procedure

ANSI C63.26-2015 - Section 5.7

### 4.6.3.Test Setting

1. Set the analyzer frequency to low, mid, high channel.
2. RBW = 1MHz
3. VBW ≥ 3*RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to “free run.”
7. User gate triggered such that the analyzer only sweeps when the device is transmitting at full power.
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

### 4.6.4.Test Setup

### 4.6.5.Test Result

| | | | |
|---|---|---|---|
| Product | 5G Sub-6 GHz M.2 Module | Test Site | SIP-SR5 |
| Test Engineer | Candy Luo | Test Date | 2021/02/01 |
| Test Band | LTE Band 26_QPSK | | |

| Channel | Frequency (MHz) | Channel Bandwidth (MHz) | Frequency Range (MHz) | Max Spurious Emissions (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| 26697 | 814.7 | 1.4 | 30 ~ 10000 | -43.58 | ≤ -13.00 | Pass |
| 26740 | 819.0 | 1.4 | 30 ~ 10000 | -41.36 | ≤ -13.00 | Pass |
| 26783 | 823.3 | 1.4 | 30 ~ 10000 | -41.33 | ≤ -13.00 | Pass |
| 26705 | 815.5 | 3 | 30 ~ 10000 | -40.78 | ≤ -13.00 | Pass |
| 26740 | 819.0 | 3 | 30 ~ 10000 | -41.64 | ≤ -13.00 | Pass |
| 26775 | 822.5 | 3 | 30 ~ 10000 | -41.58 | ≤ -13.00 | Pass |
| 26715 | 816.5 | 5 | 30 ~ 10000 | -41.71 | ≤ -13.00 | Pass |
| 26740 | 819.0 | 5 | 30 ~ 10000 | -42.75 | ≤ -13.00 | Pass |
| 26765 | 821.5 | 5 | 30 ~ 10000 | -40.32 | ≤ -13.00 | Pass |
| 26740 | 819.0 | 10 | 30 ~ 10000 | -43.74 | ≤ -13.00 | Pass |
| 26745 | 821.5 | 15 | 30 ~ 10000 | -42.53 | ≤ -13.00 | Pass |

## 1.4MHz Channel Bandwidth

### Low Channel

### Middle Channel

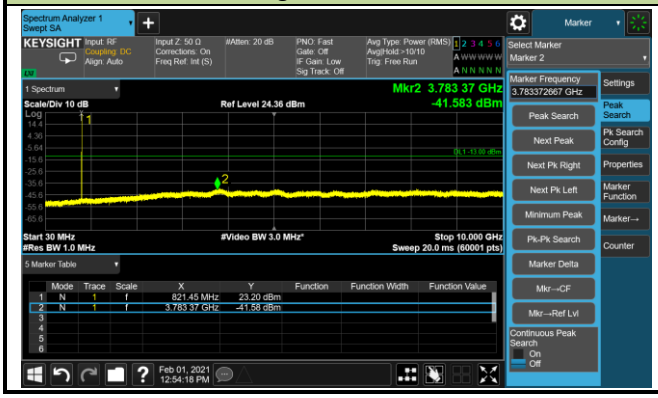
### High Channel

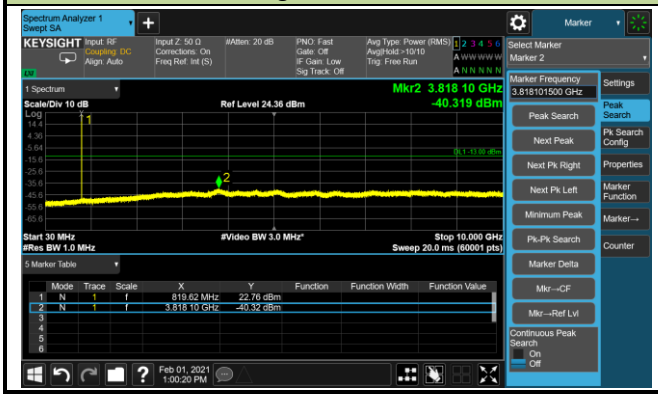
## 3MHz Channel Bandwidth

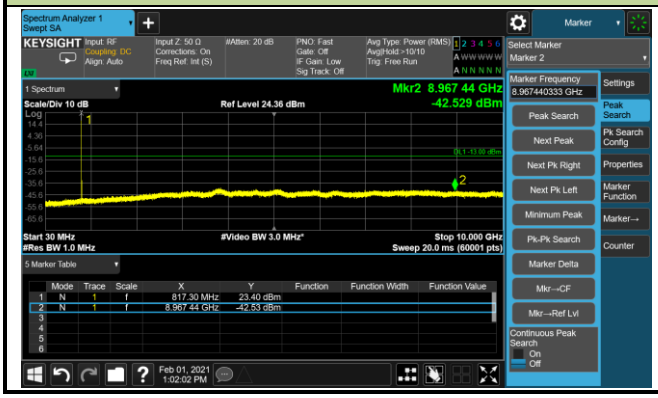
### Low Channel

### Middle Channel

### High Channel



| 5MHz Channel Bandwidth | |
|---|---|
| Low Channel | Middle Channel |
| | |
| High Channel | |
|  | |

| 10MHz Channel Bandwidth | |
|---|---|
| Middle Channel | |
| | |
| 15MHz Channel Bandwidth | |
| Middle Channel | |
|  | |

## 4.7. Radiated Spurious Emission Measurement

### 4.7.1.Test Limit

Out of band emissions: The powerof any emission outside of theauthorized operating frequency ranges must be attenuated below the transmitting power (P) by a factorof at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

E (dBμV/m) = EIRP (dBm) - 20 log D + 104.8; where D is the measurement distance in meters. The emission limit equal to 82.3dBμV/m.

### 4.7.2.Test Procedure

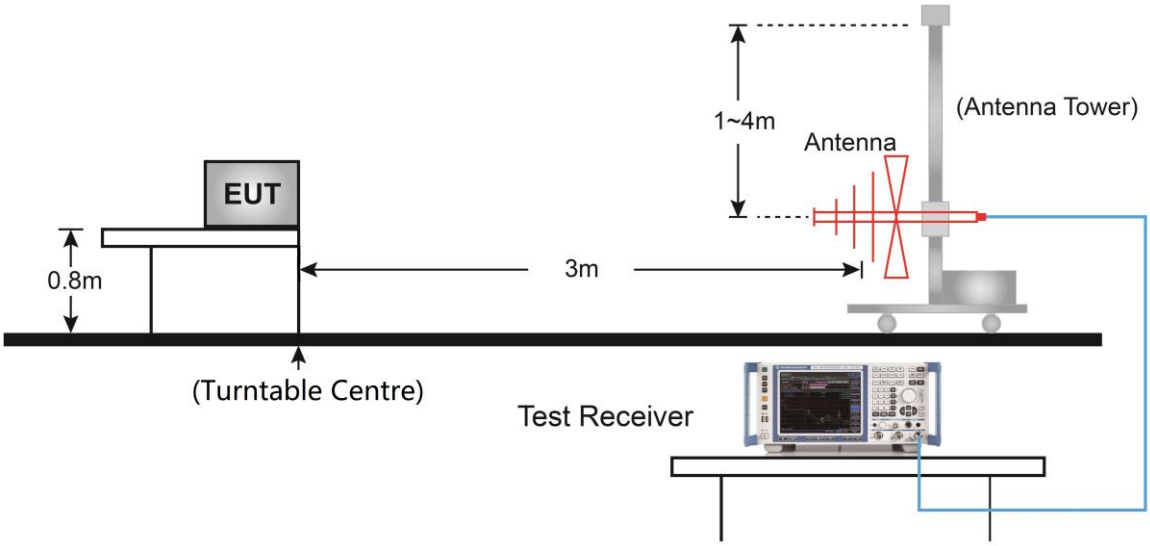
ANSI C63.26-2015 - Section 5.2.7 & 5.5

### 4.7.3.Test Setting

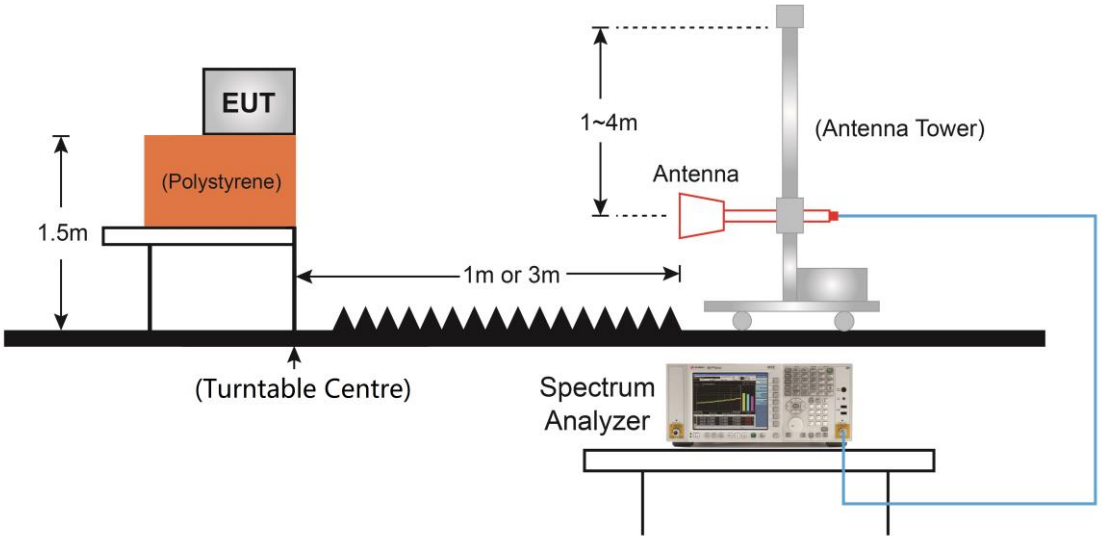
1. RBW = 1MHz
2. VBW ≥ 3*RBW
3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

### 4.7.4.Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



### 4.7.5.Test Result

| | | | |
|---|---|---|---|
| Product | 5G Sub-6 GHz M.2 Module | Test Site | WZ-AC1 |
| Test Engineer | Buter Shi | Test Date | 2021/02/05 |
| Test Band | LTE Band 26_1.4MHz_1RB_QPSK | | |

| Frequency (MHz) | Reading Level (dBμV) | Factor (dB) | Measure Level(dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector | Polarization |
|---|---|---|---|---|---|---|---|
| Low Channel | | | | | | | |
| 315.7 | 39.3 | 19.2 | 58.5 | 82.3 | -23.8 | Peak | Horizontal |
| 361.7 | 36.0 | 20.1 | 56.1 | 82.3 | -26.2 | Peak | Horizontal |
| 314.7 | 34.5 | 19.2 | 53.7 | 82.3 | -28.7 | Peak | Vertical |
| 363.7 | 31.9 | 20.2 | 52.1 | 82.3 | -30.2 | Peak | Vertical |
| 9525.5 | 37.4 | 13.7 | 51.1 | 82.3 | -31.2 | Peak | Horizontal |
| 14506.5 | 37.2 | 17.7 | 54.9 | 82.3 | -27.4 | Peak | Horizontal |
| 12118.0 | 37.5 | 14.9 | 52.4 | 82.3 | -29.9 | Peak | Vertical |
| 14039.0 | 37.7 | 17.1 | 54.8 | 82.3 | -27.5 | Peak | Vertical |
| Middle Channel | | | | | | | |
| 314.2 | 39.6 | 19.1 | 58.7 | 82.3 | -23.6 | Peak | Horizontal |
| 361.7 | 35.0 | 20.1 | 55.1 | 82.3 | -27.2 | Peak | Horizontal |
| 316.2 | 33.1 | 19.2 | 52.3 | 82.3 | -30.0 | Peak | Vertical |
| 369.0 | 30.7 | 20.4 | 51.1 | 82.3 | -31.2 | Peak | Vertical |
| 11557.0 | 37.4 | 15.2 | 52.6 | 82.3 | -29.7 | Peak | Horizontal |
| 14855.0 | 36.6 | 17.4 | 54.0 | 82.3 | -28.4 | Peak | Horizontal |
| 7120.0 | 38.0 | 10.1 | 48.1 | 82.3 | -34.2 | Peak | Vertical |
| 14889.0 | 37.8 | 17.1 | 54.9 | 82.3 | -27.5 | Peak | Vertical |
| High Channel | | | | | | | |
| 316.2 | 39.5 | 19.2 | 58.6 | 82.3 | -23.7 | Peak | Horizontal |
| 362.2 | 35.2 | 20.1 | 55.3 | 82.3 | -27.0 | Peak | Horizontal |
| 313.7 | 34.6 | 19.1 | 53.7 | 82.3 | -28.6 | Peak | Vertical |
| 364.7 | 31.5 | 20.2 | 51.7 | 82.3 | -30.6 | Peak | Vertical |
| 10571.0 | 37.6 | 15.2 | 52.8 | 82.3 | -29.5 | Peak | Horizontal |
| 14634.0 | 37.3 | 17.6 | 54.9 | 82.3 | -27.4 | Peak | Horizontal |
| 11353.0 | 36.8 | 15.5 | 52.3 | 82.3 | -30.0 | Peak | Vertical |
| 14540.5 | 36.7 | 17.7 | 54.4 | 82.3 | -27.9 | Peak | Vertical |
| Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB). | | | | | | | |

# 5. CONCLUSION

The data collected relate only the item(s) tested and show that unit is compliance with FCC Rules.

The End

# Appendix A - Test Setup Photograph

Refer to “2101RSU049-UT” file.

# Appendix B - EUT Photograph

Refer to “2101RSU049-UE” file.