# FCC RF Test Report

| | | |
|---|---|---|
| APPLICANT | : | Viavi Solutions Inc. |
| EQUIPMENT | : | XEDGE 2.0 |
| BRAND NAME | : | VIAVI |
| MODEL NAME | : | NXE-DEVICE-4M |
| STANDARD | : | 47 CFR Part 27(L), 27(D)<br>FCC Part 15 Subpart C §15.247<br>FCC Part 15 Subpart E §15.407 |
| TEST DATE(S) | : | Dec. 17, 2024 |

**The product was installed modules during the test,**
**WWAN modules (Brand Name: VIAVI, FCC ID: WUW-RM520NGL) and**
**WLAN modules (Brand Name: VIAVI, FCC ID: WUW-SXPCEAC2).**

**We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures and shown compliance with the applicable technical standards.**
**The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.**

Jason Jia

**Approved by: Jason Jia**

ACCREDITED
Cert #5145.02

***Sporton International Inc. (Kunshan)***
***No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China***

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# REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|---|---|---|---|
| FG452001T | Rev. 01 | Initial issue of report | Dec. 18, 2024 |
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# SUMMARY OF TEST RESULT

| Report Section | FCC Rule | Description | Limit | Result | Remark |
|---|---|---|---|---|---|
| 3.4 | §27.53(h) | Radiated Spurious Emission (Band 66) | < 43+10log$_{10}$(P[Watts]) | PASS | Under limit 0.62 dB at 4616.000 MHz |
| | §27.53 (a)(4) | Radiated Spurious Emission (5G NR n30) | < 70+10log$_{10}$(P[Watts]) | | |
| | 15.247(d) | Radiated Band Edges and Radiated Spurious Emission | 15.209(a) & 15.247(d) | | |
| | 15.407(b) | Unwanted Emissions | 15.407(b) & 15.209(a) | | |

**Conformity Assessment Condition:**

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

**Disclaimer:**

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

# 1 General Description

## 1.1 Applicant

**Viavi Solutions Inc.**
1445 South Spectrum Boulevard, Suite 102, Chandler, Arizona 85286

## 1.2 Manufacturer

**Viavi Solutions Inc.**
1445 South Spectrum Boulevard, Suite 102, Chandler, Arizona 85286

## 1.3 Product Feature of Equipment Under Test

| Product Feature | |
|---|---|
| **Equipment** | XEDGE 2.0 |
| **Brand Name** | VIAVI |
| **Model Name** | NXE-DEVICE-4M |
| **IMEI Code** | Radiation :<br>IMEI A: 868371051120539<br>IMEI B: 868371051121032<br>IMEI C: 868371051143184<br>IMEI D: 868371051635312 |
| **EUT supports Radios application** | WCDMA/LTE/5G NR<br>WLAN 2.4GHz 802.11b/g/n HT20/HT40<br>WLAN 2.4GHz 802.11ac VHT20/VHT40<br>WLAN 5GHz 802.11a/n HT20/HT40<br>W LAN 5GHz 802.11ac VHT20/VHT40/VHT80<br>GPS |
| **EUT Stage** | Identical Prototype |

## 1.4 Product Specification of Equipment Under Test

| Standards-related Product Specification | |
|---|---|
| **Tx Frequency** | LTE Band 66 : 1710 MHz ~ 1780 MHz<br>5G NR n30 : 2305 MHz ~ 2315 MHz<br>802.11b/g/n/ac: 2400 MHz ~ 2483.5 MHz<br>802.11a/n/ac: 5150 MHz ~ 5250 MHz;<br>5250 MHz ~ 5350 MHz;<br>5470 MHz ~ 5725 MHz<br>5725 MHz ~ 5850 MHz |
| **Rx Frequency** | LTE Band 66 : 2110 MHz~ 2180 MHz<br>5G NR n30 : 2350 MHz ~ 2360 MHz<br>802.11b/g/n/ac: 2400 MHz ~ 2483.5 MHz<br>802.11a/n/ac: 5150 MHz ~ 5250 MHz;<br>5250 MHz ~ 5350 MHz;<br>5470 MHz ~ 5725 MHz<br>5725 MHz ~ 5850 MHz |
| **Antenna Type** | WWAN/WLAN: Dipole Antenna |
| **Type of Modulation** | LTE: QPSK / 16QAM / 64QAM / 256QAM<br>5G NR:<br>DFT-s-OFDM (PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM)<br>CP-OFDM (QPSK / 16QAM / 64QAM / 256QAM)<br>802.11b: DSSS (DBPSK / DQPSK / CCK)<br>802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) |

## 1.5 Modification of EUT

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

## 1.6 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

| **Test Firm** | Sporton International Inc. (Kunshan) | | |
|---|---|---|---|
| **Test Site Location** | No. 1098, Pengxi North Road, Kunshan Economic Development Zone<br>Jiangsu Province 215300 People's Republic of China<br>TEL : +86-512-57900158 | | |
| **Test Site No.** | **Sporton Site No.** | **FCC Designation No.** | **FCC Test Firm Registration No.** |
| | 03CH05-KS | CN1257 | 314309 |

## 1.7 Test Software

| Item | Site | Manufacture | Name | Version |
|---|---|---|---|---|
| 1. | 03CH05-KS | AUDIX | E3 | 210616 |

## 1.8 Applicable Standards

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

- 47 CFR Part 27(L), 27(D),
- 47 CFR Part 15 Subpart E §15.407
- 47 CFR Part 15 Subpart C §15.247
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 558074 D01 15.247 Meas Guidance v05r02
- ANSI C63.10-2013
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.

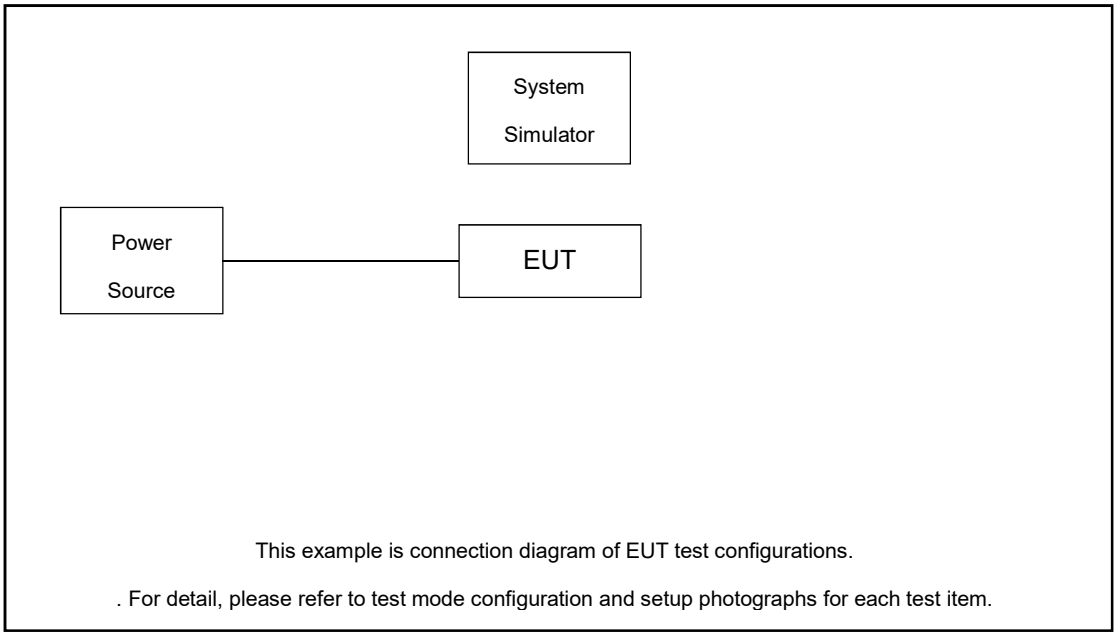
# 2 Test Configuration of Equipment Under Test

## 2.1 Test Mode

For simultaneous transmission test mode, the combination testing was assessed from the worst RSE link mode of WWAN (WCDMA/LTE/5G NR) and the worst RSE link mode of WLAN (2.4G/5G).

| Simultaneous transmission |
|---|
| 802.11g_Tx_Ch06 + Part 27D DC_66A_n30A |
| 802.11a_Tx_Ch64 + Part 27D DC_66A_n30A |

## 2.2 Connection Diagram of Test System




## 2.3 Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model No. | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1. | LTE Base Station | Anritsu | MT8821C | N/A | N/A | Unshielded, 1.8 m |
| 2. | NR Base Station | Anritsu | MT8000A | N/A | N/A | Unshielded, 1.8 m |

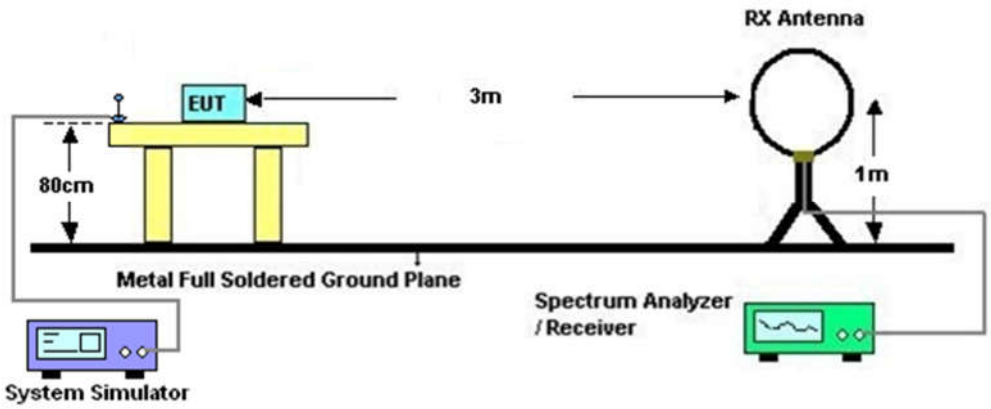
# 3 Radiated Test Items

## 3.1 Measuring Instruments

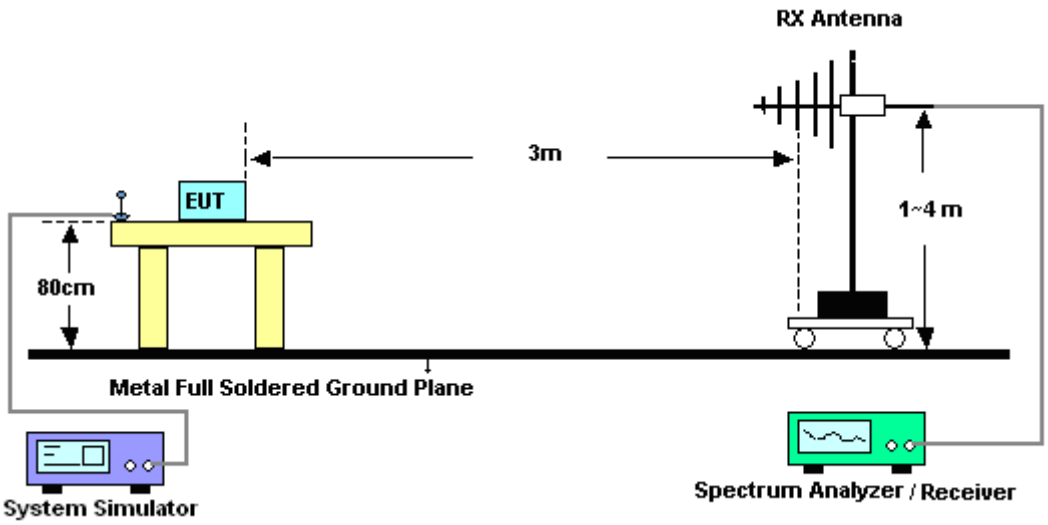
See list of measuring instruments of this test report.

## 3.2 Test Setup

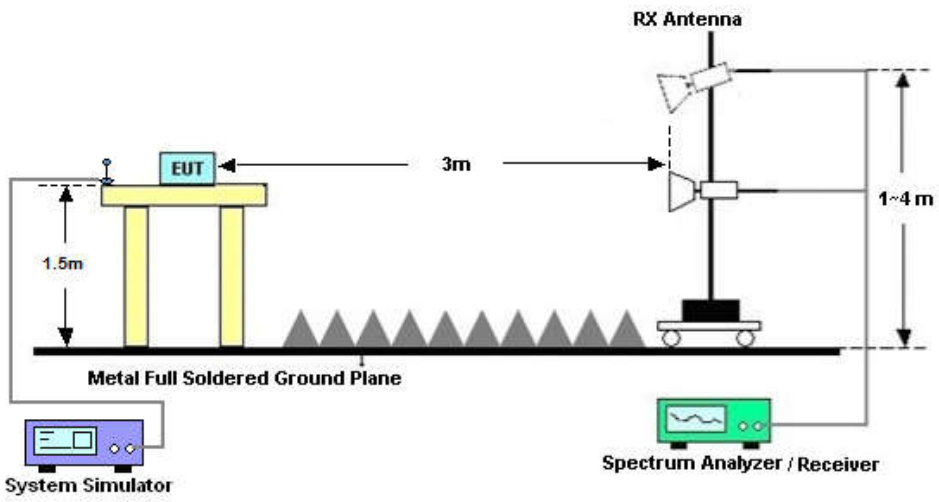
### 3.2.1 For radiated test below 30MHz




### 3.2.2 For radiated test from 30MHz to 1GHz



### 3.2.3 For radiated test above 1GHz




## 3.3 Test Result of Radiated Test

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

Please refer to Appendix A.

## 3.4 Radiated Spurious Emission

### 3.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26.

For LTE Band 66

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For 5G NR n30

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 70 + 10 log (P) dB.

For Part 15.247 & 15.407

a. In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

b. For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

   For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

   For transmitters operating in the 5470-5725 MHz band: all emissions outside of the 5470-5725 MHz band shall not exceed an EIRP of -27 dBm/MHz.

| EIRP (dBm) | Field Strength at 3m (dBµV/m) |
|---|---|
| - 27 | 68.2 |

**Note:** The following formula is used to convert the EIRP to field strength.

$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

$E_{Meas}$ is the field strength of the emission at the measurement distance, in dBµV/m

$d_{Meas}$ is the measurement distance, in m

c. Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|---|---|---|
| 0.009 – 0.490 | 2400/F(kHz) | 300 |
| 0.490 – 1.705 | 24000/F(kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |
| 30 – 88 | 100 | 3 |
| 88 – 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

### 3.4.2 Test Procedures

For LTE Band 66/5G NR n30

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

    For Band 66:

    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

    = P(W)- [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

    = -13dBm.

    For 5G NR n30:

    The limit line is derived from 70 + 10log(P)dB below the transmitter power P(Watts)

    = P(W)- [70 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [70 + 10log(P)] (dB)

    = -40dBm.

For Part 15.247

1. The testing follows ANSI C63.10-2013 clause 11.11 & 11.12
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

For Part 15.407

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

# 4 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| EXA Spectrum Analyzer | Keysight | N9010B | MY60242126 | 10Hz-44G,MAX 30dB | Oct. 10, 2024 | Dec. 17, 2024 | Oct. 09, 2025 | Radiation (03CH05-KS) |
| Loop Antenna | R&S | HFH2-Z2E | 101125 | 9kHz~30MHz | Sep. 08, 2024 | Dec. 17, 2024 | Sep. 07, 2025 | Radiation (03CH05-KS) |
| Bilog Antenna | TeseQ | CBL6111D | 49921 | 30MHz-1GHz | Apr. 18, 2024 | Dec. 17, 2024 | Apr. 17, 2025 | Radiation (03CH05-KS) |
| Double Ridge Horn Antenna | ETS-Lindgren | 3117 | 00218642 | 1GHz~18GHz | Apr. 11, 2024 | Dec. 17, 2024 | Apr. 10, 2025 | Radiation (03CH05-KS) |
| SHF-EHF Horn | Com-power | AH-840 | 101093 | 18GHz~40GHz | Jan. 06, 2024 | Dec. 17, 2024 | Jan. 05, 2025 | Radiation (03CH05-KS) |
| Amplifier | SONOMA | 310N | 381512 | 9KHz-1GHz | Jan. 02, 2024 | Dec. 17, 2024 | Jan. 01, 2025 | Radiation (03CH05-KS) |
| Amplifier | EM | EM18G40GA | 060852 | 18~40GHz | Jan. 02, 2024 | Dec. 17, 2024 | Jan. 01, 2025 | Radiation (03CH05-KS) |
| high gain Amplifier | EM | EM01G18GA | 060843 | 1Ghz-18Ghz | Jan. 03, 2024 | Dec. 17, 2024 | Jan. 02, 2025 | Radiation (03CH05-KS) |
| Amplifier | EM | EM01G18GA | 060833 | 1Ghz-18Ghz | Jan. 03, 2024 | Dec. 17, 2024 | Jan. 02, 2025 | Radiation (03CH05-KS) |
| AC Power Source | Chroma | 61601 | F104090004 | N/A | NCR | Dec. 17, 2024 | NCR | Radiation (03CH05-KS) |
| Turn Table | ChamPro | EM 1000-T | 060762-T | 0~360 degree | NCR | Dec. 17, 2024 | NCR | Radiation (03CH05-KS) |
| Antenna Mast | ChamPro | EM 1000-A | 060762-A | 1 m~4 m | NCR | Dec. 17, 2024 | NCR | Radiation (03CH05-KS) |

NCR: No Calibration Required

# 5 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

**Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **3.30 dB** |

For WWAN Bands:

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.83 dB** |

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.83 dB** |

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.83 dB** |

For WLAN Bands:

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **6.02 dB** |

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **5.22 dB** |

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

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **5.34 dB** |

# Appendix A. Test Results of Radiated Test

## Radiated Spurious Emission

| Test Engineer : | Jerry Xu | Temperature : | 23~25℃ |
|---|---|---|---|
| | | Relative Humidity : | 41~42% |

Pre-scanned harmonic for the different antenna combinations, we choose the worst antenna mode to perform final test and record in the report.

## Radiated Spurious Emission Test Modes

| Mode | Band | Band (GHz) | Antenna | Modulation | Channel | Frequency | Data Rate | RU | Remark |
|---|---|---|---|---|---|---|---|---|---|
| Mode 1 | WLAN 2.4G | 2400-2483.5 | - | 802.11g | 06 | 2437 | 6Mbps | - | - |
| | DC_66A_n30A | | | | | | | | |
| Mode 2 | U-NII-2A | 5.25-5.35 | - | 802.11a | 64 | 5320 | 6Mbps | - | - |
| | DC_66A_n30A | | | | | | | | |

## Summary of each worse mode

Table 1:

| Mode | Modulation | Ch. | Freq. (MHz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Pol. | Peak Avg. | Result | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 802.11g | 06 | 2310.13 | 46.73 | 54.00 | -7.27 | V | AVERAGE | Pass | Band Edge |
| 1 | 802.11g | 06 | 5001.00 | 48.07 | 74.00 | -25.93 | V | Peak | Pass | Harmonic |
| 2 | 802.11a | 64 | 5350.00 | 46.09 | 54.00 | -7.91 | V | AVERAGE | Pass | Band Edge |
| 2 | 802.11a | 64 | 7093.13 | 53.86 | 68.20 | -14.34 | V | Peak | Pass | Harmonic |

Table 2:

| Mode | Modulation | Ch. | Freq. (MHz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Pol. | Peak Avg. | Result | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | n30 | 462000 | 4616.00 | 54.58 | 55.20 | -0.62 | H | Peak | Pass | Harmonic |
| | | | 6926.00 | 43.99 | 55.20 | -11.21 | H | Peak | Pass | Harmonic |
| | | | 4616.00 | 53.22 | 55.20 | -1.98 | V | Peak | Pass | Harmonic |
| | | | 6926.00 | 47.46 | 55.20 | -7.74 | V | Peak | Pass | Harmonic |
| | | | 9236.00 | 47.80 | 55.20 | -7.4 | V | Peak | Pass | Harmonic |
| 2 | n30 | 462000 | 4616.00 | 52.63 | 55.20 | -7.91 | H | Peak | Pass | Harmonic |
| | | | 9236.00 | 44.16 | 55.20 | -14.34 | H | Peak | Pass | Harmonic |
| | | | 4616.00 | 52.90 | 55.20 | -2.3 | V | Peak | Pass | Harmonic |
| | | | 9236.00 | 51.98 | 55.20 | -3.22 | V | Peak | Pass | Harmonic |

**Note:** The following formula is used to convert the EIRP to field strength.

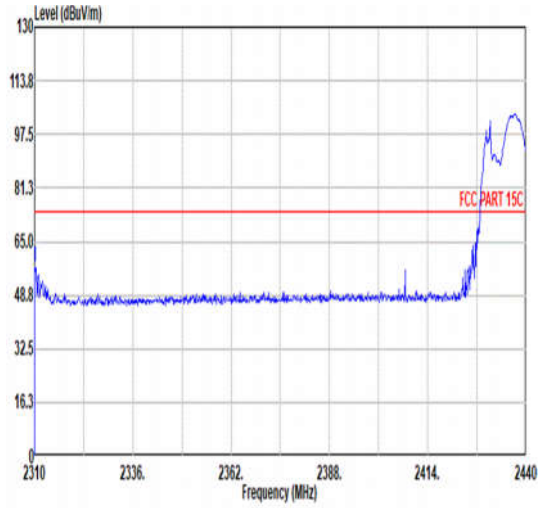
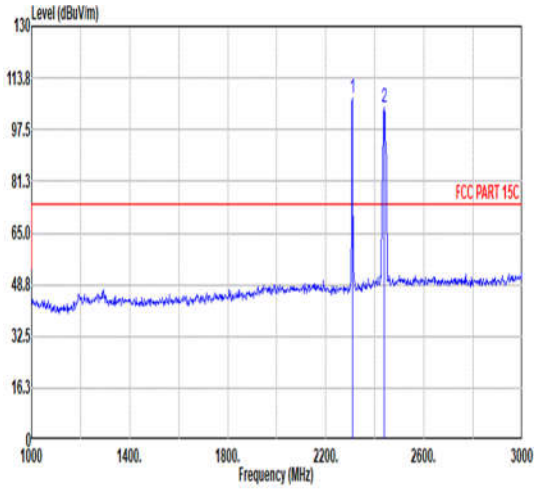
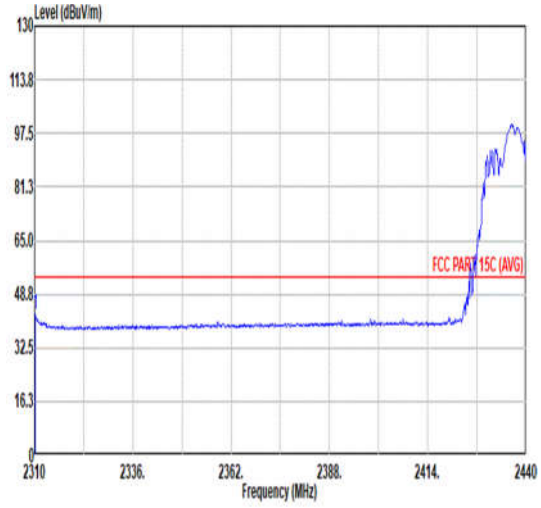
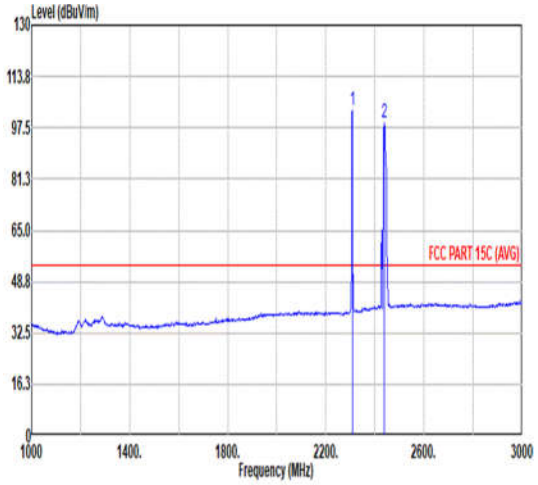
$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

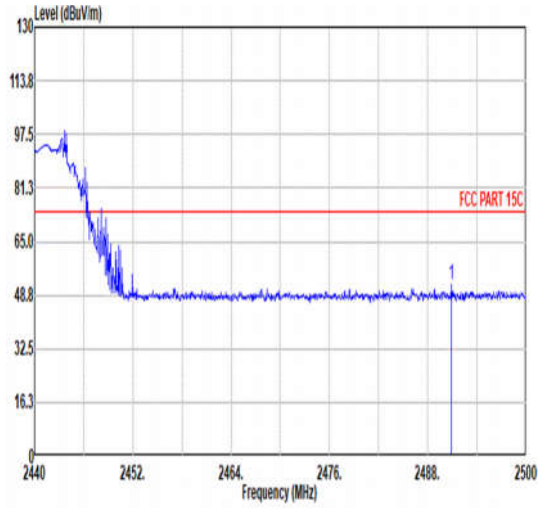
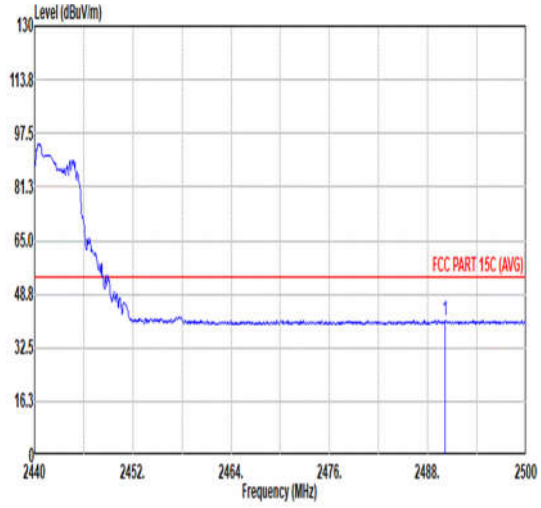
where

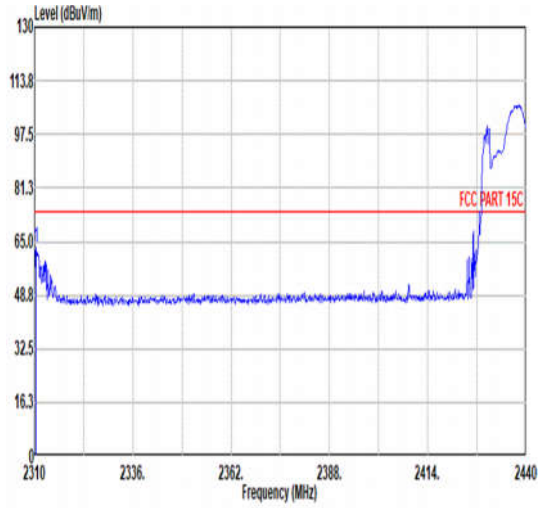
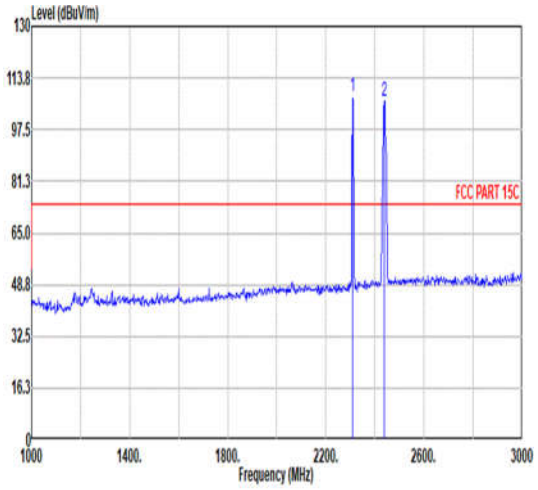
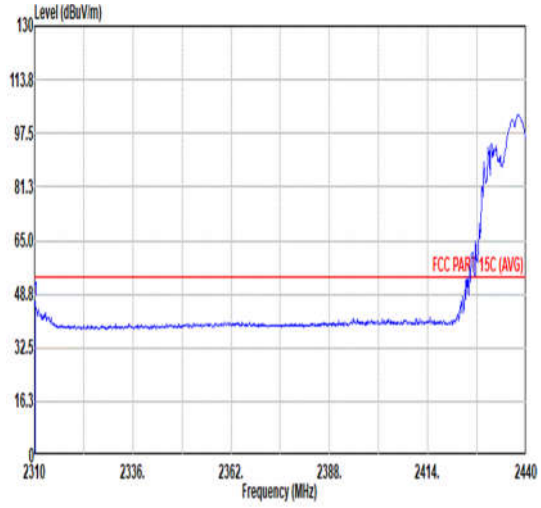
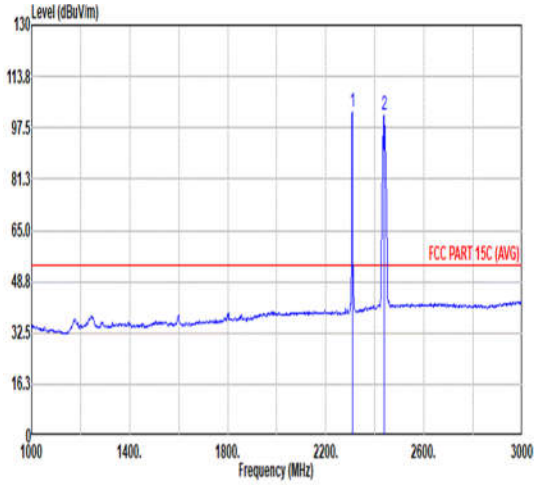
EIRP is the equivalent isotropically radiated power, in dBm, -40dBm

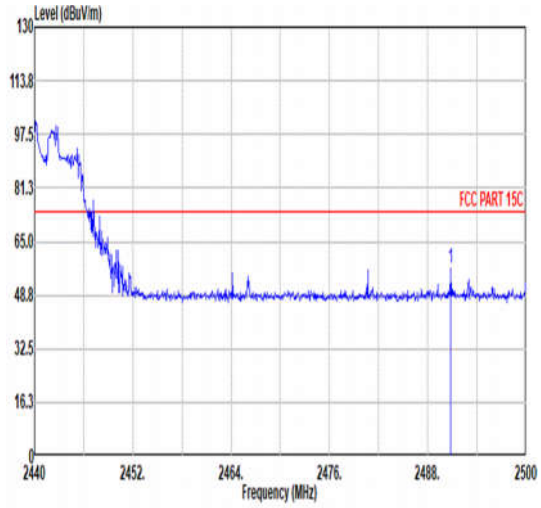
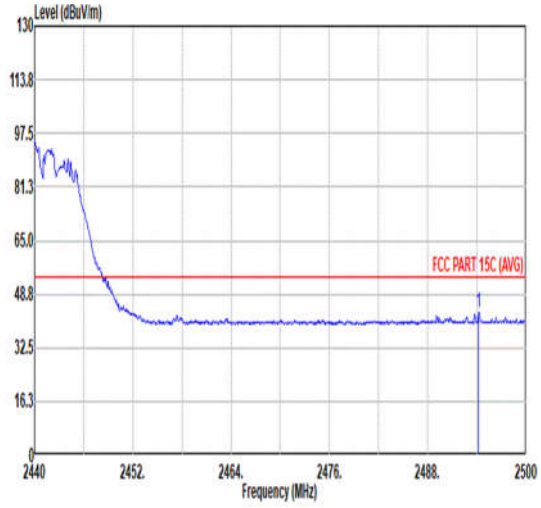
$E_{Meas}$ is the field strength of the emission at the measurement distance, in dBμV/m

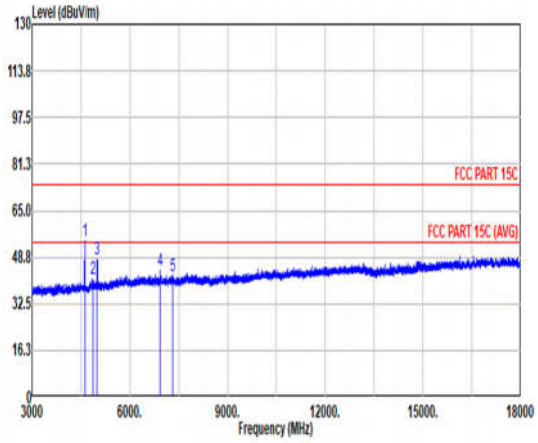
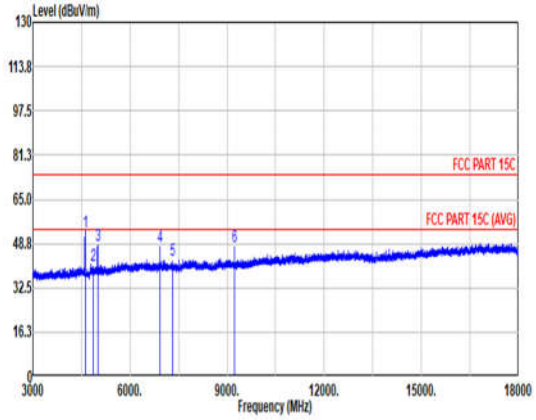
$d_{Meas}$ is the measurement distance, in m, 3m

| Mode | 1 | |
|---|---|---|
| | Band Edge - L | |
| | 2400-2483.5_802.11g_CH06_2437MHz | |
| Pol. | Horizontal | Fundamental |
| Peak |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.00 57.56 74.00 -16.44 50.26 31.40 6.98 37.08 6.00 165 0 PEAK |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.00 107.59 ------ ------ 100.29 31.40 6.98 37.08 6.00 165 0 Peak<br>2 2437.00 104.25 ------ ------ 95.66 32.37 7.18 36.96 6.00 165 0 Peak |
| Avg |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.13 42.61 54.00 -11.39 35.31 31.40 6.98 37.08 6.00 165 0 AVERAGE |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.00 102.85 ------ ------ 95.55 31.40 6.98 37.08 6.00 165 0 Average<br>2 2437.00 98.95 ------ ------ 90.36 32.37 7.18 36.96 6.00 165 0 Average |

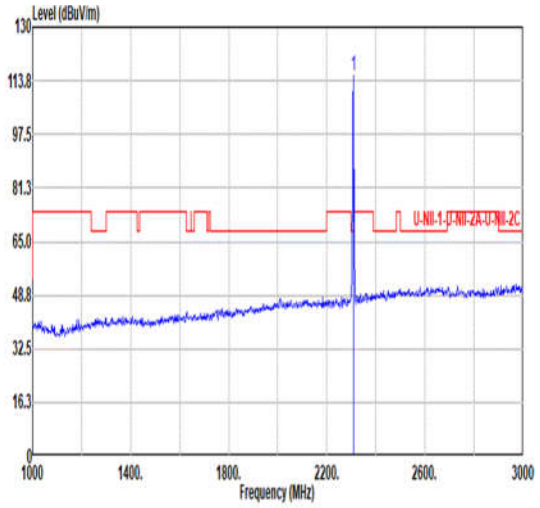
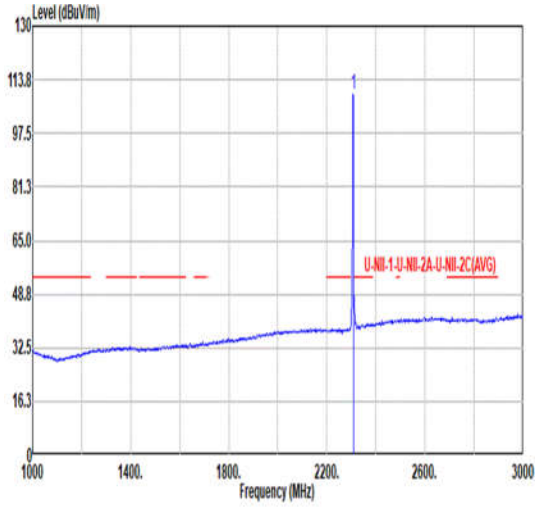
| Mode | 1 | |
|---|---|---|
| | Band Edge - R | |
| | 2400-2483.5_802.11g_CH06_2437MHz | |
| Pol. | Horizontal | Fundamental |
| Peak |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2490.88 51.83 74.00 -22.17 42.91 32.48 7.27 36.83 6.00 165 0 PEAK | Blank |
| Avg |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2490.16 40.92 54.00 -13.08 32.00 32.48 7.27 36.83 6.00 165 0 AVERAGE | Blank |

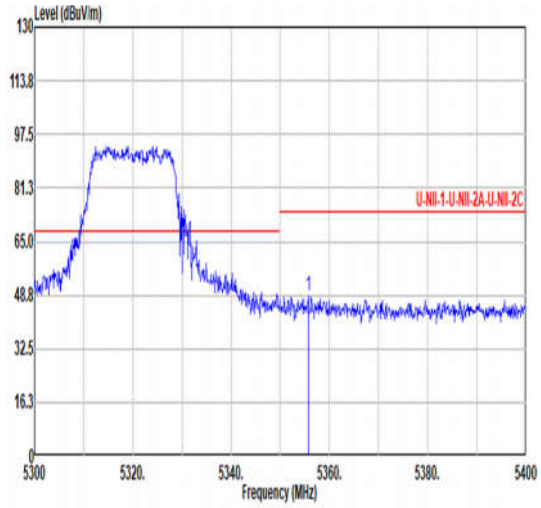
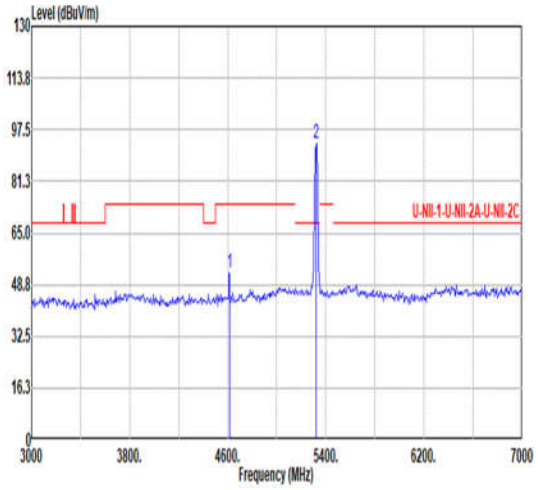
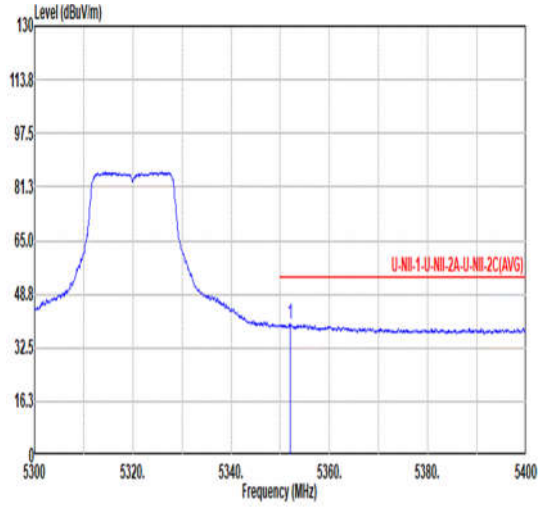
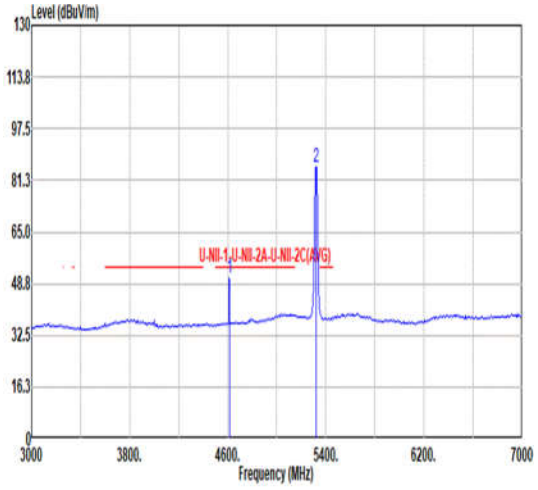
| Mode | 1 | |
|---|---|---|
| | Band Edge - L | |
| | 2400-2483.5_802.11g_CH06_2437MHz | |
| Pol. | Vertical | Fundamental |
| Peak |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.52 63.17 74.00 -10.83 55.86 31.41 6.98 37.08 6.00 132 360 PEAK |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.00 107.75 ------ ------ 100.45 31.40 6.98 37.08 6.00 132 360 Peak<br>2 2437.00 106.63 ------ ------ 98.04 32.37 7.18 36.96 6.00 132 360 Peak |
| Avg |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.13 46.73 54.00 -7.27 39.43 31.40 6.98 37.08 6.00 132 360 AVERAGE |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.00 102.60 ------ ------ 95.30 31.40 6.98 37.08 6.00 132 360 Average<br>2 2437.00 101.40 ------ ------ 92.81 32.37 7.18 36.96 6.00 132 360 Average |

| Mode | 1 | |
|---|---|---|
| | Band Edge - R | |
| | 2400-2483.5_802.11g_CH06_2437MHz | |
| Pol. | Vertical | Fundamental |
| Peak |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2490.82 57.02 74.00 -16.98 48.10 32.48 7.27 36.83 6.00 132 360 PEAK | Blank |
| Avg |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2494.18 43.29 54.00 -10.71 34.35 32.49 7.27 36.82 6.00 132 360 AVERAGE | Blank |

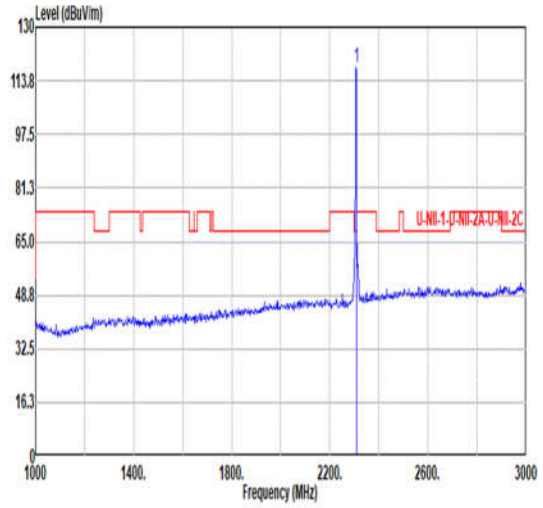
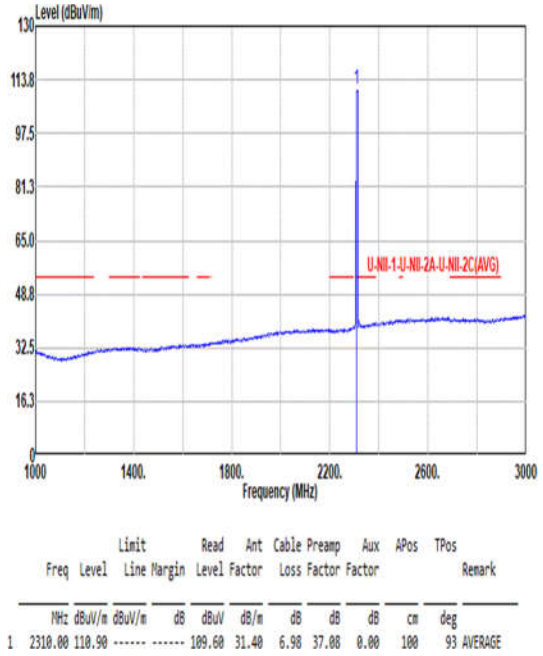
| Mode | 1 | |
|---|---|---|
| | Harmonic | |
| | 2400-2483.5_802.11g_CH06_2437MHz | |
| Pol. | Horizontal | Vertical |
| Peak<br>Avg |  <br><br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 4616.00 54.58 74.00 -19.42 76.00 33.90 10.02 65.34 0.00 -- -- Peak<br>2 4874.00 41.21 74.00 -32.79 62.31 34.14 10.29 65.53 0.00 -- -- PEAK<br>3 4999.00 48.02 74.00 -25.98 68.93 34.26 10.45 65.62 0.00 -- -- Peak<br>4 6926.00 43.99 74.00 -30.01 61.57 35.60 12.38 65.56 0.00 -- -- Peak<br>5 7311.00 42.14 74.00 -31.86 59.99 35.72 12.72 66.29 0.00 -- -- PEAK |  <br><br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 4616.00 53.22 74.00 -20.78 74.64 33.90 10.02 65.34 0.00 -- -- Peak<br>2 4874.00 40.59 74.00 -33.41 61.69 34.14 10.29 65.53 0.00 -- -- PEAK<br>3 5001.00 48.07 74.00 -25.93 68.98 34.26 10.45 65.62 0.00 -- -- Peak<br>4 6926.00 47.46 74.00 -26.54 65.04 35.60 12.38 65.56 0.00 -- -- Peak<br>5 7311.00 42.74 74.00 -31.26 60.59 35.72 12.72 66.29 0.00 -- -- PEAK<br>6 9236.00 47.80 74.00 -26.20 64.08 36.37 14.49 67.14 0.00 -- -- Peak |

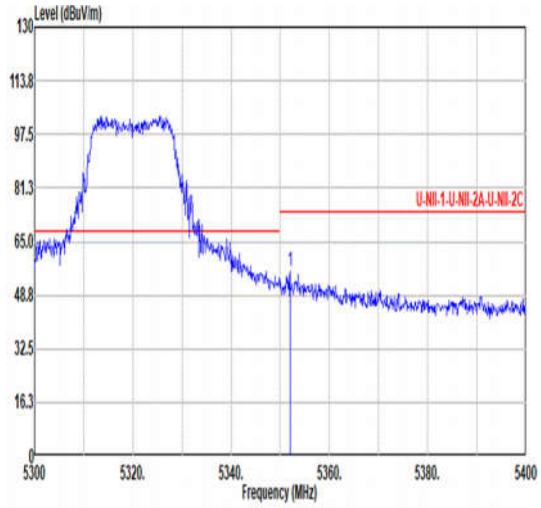
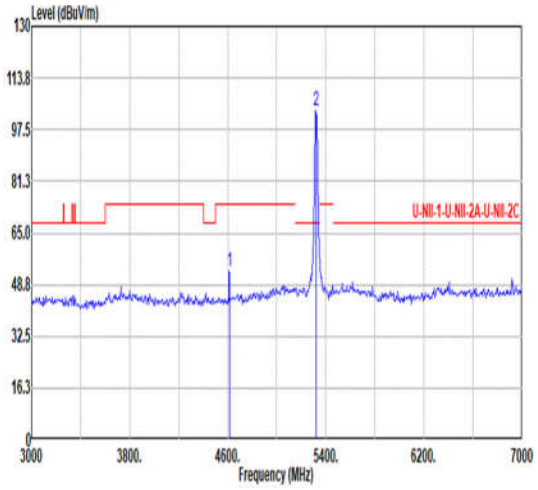
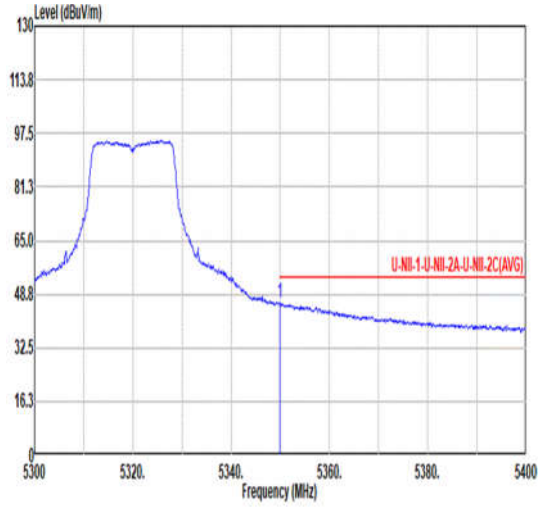
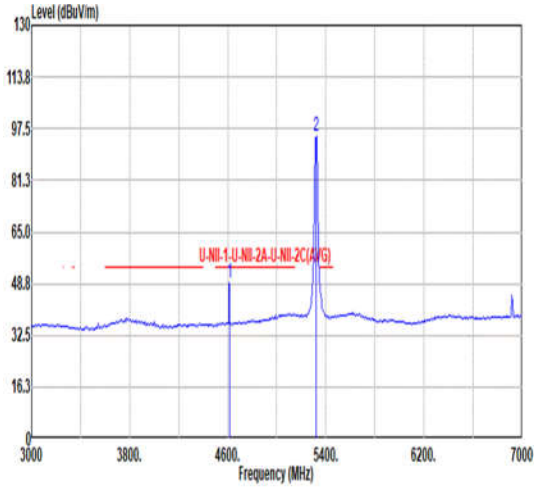
Note: #1/4 of Horizontal and #1/4/6 of Vertical are from WWAN bands which are Harmonics. Please refer to Table 2, the Peak levels meet for limit.

| Mode | 2 | |
|---|---|---|
| | Band Edge - L | |
| | U-NII-2A_5.25-5.35_802.11a_CH64_5320MHz | |
| Pol. | Horizontal | Fundamental |
| Peak | Blank |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.00 115.29 ------ ------ 113.99 31.40 6.98 37.08 0.00 100 93 Peak |
| Avg | Blank |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 2310.00 109.62 ------ ------ 108.32 31.40 6.98 37.08 0.00 100 93 AVERAGE |

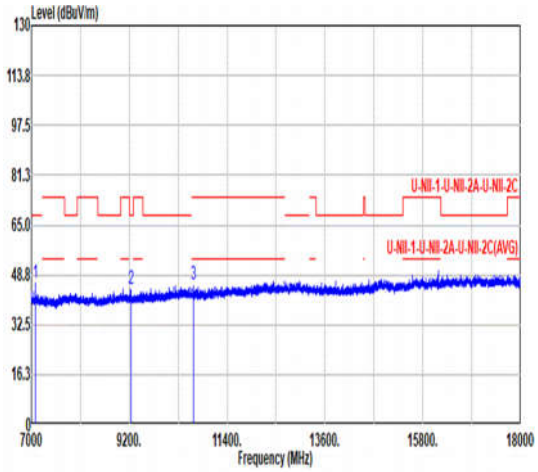
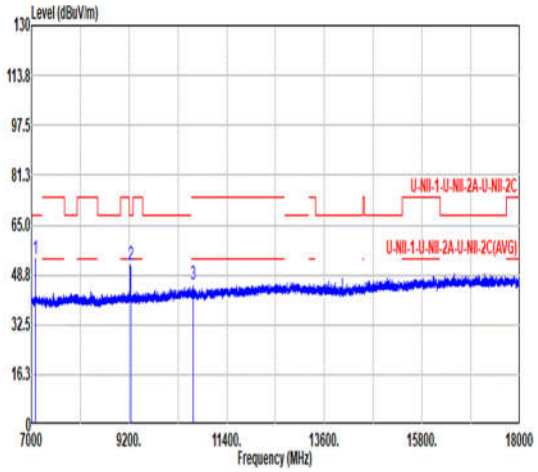
| Mode | 2 | |
|---|---|---|
| | Band Edge - R | |
| | U-NII-2A_5.25-5.35_802.11a_CH64_5320MHz | |
| Pol. | Horizontal | Fundamental |
| Peak |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 5355.70 48.40 74.00 -25.60 39.41 34.60 10.75 36.36 0.00 100 339 PEAK |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 4616.00 52.63 74.00 -21.37 46.38 33.90 10.02 37.67 0.00 100 339 Peak<br>2 5320.00 93.44 ------ ------ 84.54 34.57 10.73 36.40 0.00 100 339 PEAK |
| Avg |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 5352.00 39.65 54.00 -14.35 30.68 34.59 10.75 36.37 0.00 100 339 AVERAGE |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 4616.00 50.42 ------ ------ 44.17 33.90 10.02 37.67 0.00 100 339 AVERAGE<br>2 5320.00 85.48 ------ ------ 76.60 34.56 10.73 36.41 0.00 100 339 AVERAGE |

Note: #1 is from WWAN bands which is Harmonics. The Average levels of WWAN bands are only reported. Please refer to Table 2, the Peak levels meet for limit.

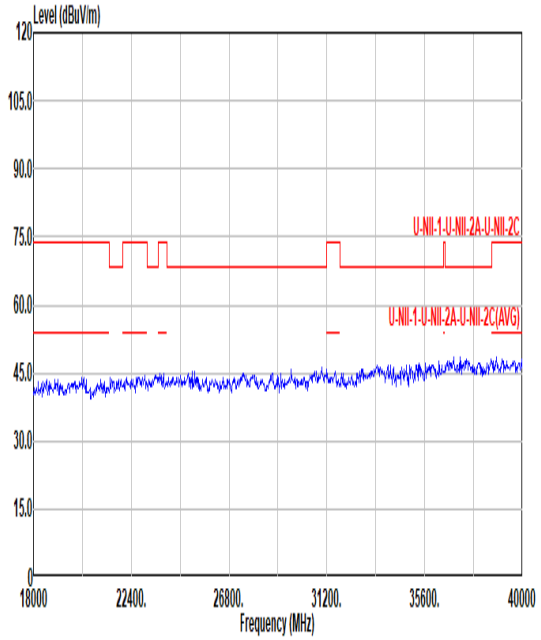
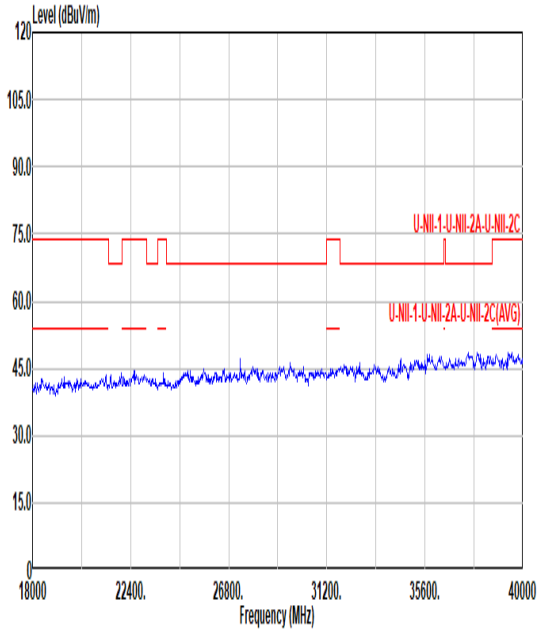
| Mode | 2 | |
|---|---|---|
| | Band Edge - L | |
| | U-NII-2A_5.25-5.35_802.11a_CH64_5320MHz | |
| Pol. | Vertical | Fundamental |
| Peak | Blank |  |
| Avg | Blank |  |

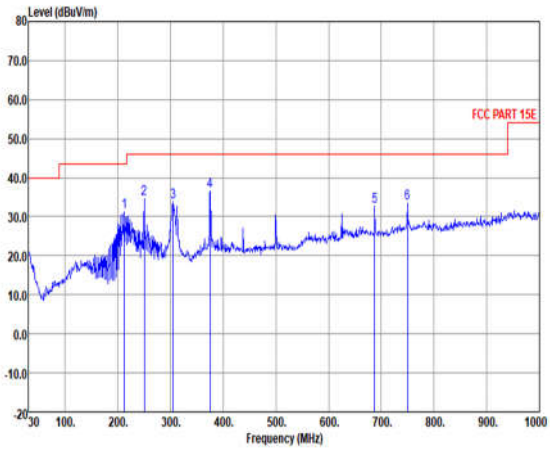
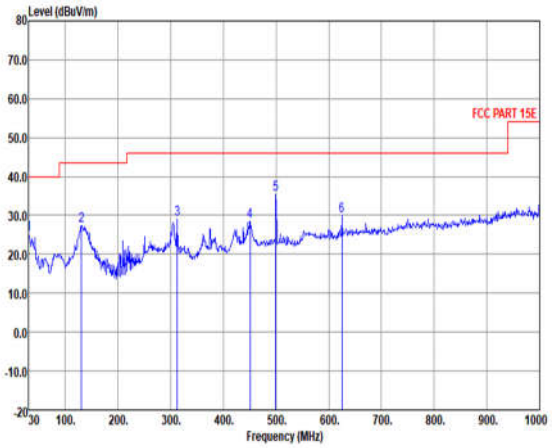
| Mode | 2 | |
|---|---|---|
| | Band Edge - R | |
| | U-NII-2A_5.25-5.35_802.11a_CH64_5320MHz | |
| Pol. | Vertical | Fundamental |
| Peak |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 5352.00 56.12 74.00 -17.88 47.15 34.59 10.75 36.37 0.00 348 68 PEAK |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 4616.00 52.90 74.00 -21.10 46.65 33.90 10.02 37.67 0.00 348 68 Peak<br>2 5320.00 103.31 ------ ------ 94.44 34.56 10.73 36.42 0.00 348 68 PEAK |
| Avg |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 5350.00 46.09 54.00 -7.91 37.12 34.59 10.75 36.37 0.00 348 68 AVERAGE |  <br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 4616.00 49.25 ------ ------ 43.00 33.90 10.02 37.67 0.00 348 68 AVERAGE<br>2 5320.00 95.21 ------ ------ 86.31 34.57 10.73 36.40 0.00 348 68 AVERAGE |

Note: #1 is from WWAN bands which is Harmonics. The Average levels of WWAN bands are only reported. Please refer to Table 2, the Peak levels meet for limit.

| Mode | 2 | |
|---|---|---|
| | Harmonic | |
| | U-NII-2A_5.25-5.35_802.11a_CH64_5320MHz | |
| Pol. | Horizontal | Vertical |
| Peak<br>Avg |  <br><br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 7093.13 46.34 68.20 -21.86 63.79 35.69 12.58 65.72 0.00 -- -- Peak<br>2 9236.00 44.16 68.20 -24.04 60.44 36.37 14.49 67.14 0.00 -- -- Peak<br>3 10640.00 45.84 74.00 -28.16 59.34 37.60 15.71 66.81 0.00 -- -- PEAK |  <br><br>Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark<br>MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg<br>1 7093.13 53.86 68.20 -14.34 71.31 35.69 12.58 65.72 0.00 -- -- Peak<br>2 9236.00 51.98 68.20 -16.22 68.26 36.37 14.49 67.14 0.00 -- -- Peak<br>3 10640.00 45.40 74.00 -28.60 58.90 37.60 15.71 66.81 0.00 -- -- PEAK |

Note: #2 is from WWAN bands which is Harmonics. Please refer to Table 2, the Peak levels meet for limit.

| Mode | 1 | |
|---|---|---|
| | 18G-40G | |
| | 2400-2483.5_802.11g_CH06_2437MHz | |
| Pol. | Horizontal | Vertical |
| Peak<br>Avg |  |  |

| Mode | 1 | |
|---|---|---|
| | 30-1G | |
| | 2400-2483.5_802.11g_CH06_2437MHz | |
| Pol. | Horizontal | Vertical |
| Peak |  |  |

Horizontal:

| | Freq | Level | Over Limit | Limit Line | Read Level | CableLoss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB/m | dB | cm | deg | |
| 1 | 212.36 | 31.21 | -12.29 | 43.50 | 46.72 | 2.09 | 15.19 | 32.79 | --- | --- | Peak |
| 2 | 250.19 | 34.66 | -11.34 | 46.00 | 46.57 | 2.10 | 18.88 | 32.89 | --- | --- | Peak |
| 3 | 304.51 | 33.70 | -12.30 | 46.00 | 44.58 | 2.57 | 19.38 | 32.83 | --- | --- | Peak |
| 4 | 375.32 | 36.59 | -9.41 | 46.00 | 45.66 | 2.88 | 20.99 | 32.94 | --- | --- | Peak |
| 5 | 687.66 | 32.77 | -13.23 | 46.00 | 35.55 | 3.90 | 26.56 | 33.24 | --- | --- | Peak |
| 6 | 749.74 | 33.49 | -12.51 | 46.00 | 34.53 | 4.07 | 28.11 | 33.22 | --- | --- | Peak |

Vertical:

| | Freq | Level | Over Limit | Limit Line | Read Level | CableLoss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB/m | dB | cm | deg | |
| 1 | 30.00 | 24.99 | -15.01 | 40.00 | 31.65 | 0.76 | 25.39 | 32.81 | --- | --- | Peak |
| 2 | 130.88 | 27.44 | -16.06 | 43.50 | 40.49 | 1.69 | 17.95 | 32.69 | --- | --- | Peak |
| 3 | 312.27 | 29.08 | -16.92 | 46.00 | 39.74 | 2.60 | 19.57 | 32.83 | --- | --- | Peak |
| 4 | 450.98 | 28.51 | -17.49 | 46.00 | 35.50 | 3.14 | 22.93 | 33.06 | --- | --- | Peak |
| 5 | 499.48 | 35.56 | -10.44 | 46.00 | 41.45 | 3.14 | 24.12 | 33.15 | --- | --- | Peak |
| 6 | 624.61 | 29.90 | -16.10 | 46.00 | 33.48 | 3.68 | 26.03 | 33.29 | --- | --- | Peak |