



# FCC RADIO TEST REPORT

**FCC ID** : CNFAMFR1  
**Equipment** : Camera  
**Brand Name** : GoPro  
**Model Name** : AMFR1  
**Applicant** : GoPro, Inc.  
 3025 Clearview Way San Mateo, CA 94402 United States of America  
**Manufacturer** : GoPro, Inc.  
 3025 Clearview Way San Mateo, CA 94402 United States of America  
**Standard** : FCC Part 15 Subpart E §15.407

The product was received on Jan. 11, 2024 and testing was performed from Jan. 15, 2024 to Mar. 06, 2024. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

*Louis Wu*

Approved by: Louis Wu

**Sporton International Inc. Wensan Laboratory**

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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### History of this test report

| Report No. | Version | Description             | Issue Date    |
|------------|---------|-------------------------|---------------|
| FR3D2932E  | 01      | Initial issue of report | Mar. 08, 2024 |
|            |         |                         |               |
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|            |         |                         |               |



### Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items                     | Result (PASS/FAIL) | Remark                                |
|---------------|-----------------|--------------------------------|--------------------|---------------------------------------|
| 3.1           | 15.403(i)       | 6dB & 26dB Bandwidth           | Pass               | -                                     |
| 3.1           | 2.1049          | 99% Occupied Bandwidth         | Reporting only     | -                                     |
| 3.2           | 15.407(a)       | Maximum Conducted Output Power | Pass               | -                                     |
| 3.3           | 15.407(a)       | Power Spectral Density         | Pass               | -                                     |
| 3.4           | 15.407(b)       | Unwanted Emissions             | Pass               | 2.59 dB under the limit at 180.12 MHz |
| 3.5           | 15.207          | AC Conducted Emission          | Pass               | 19.30 dB under the limit at 0.57 MHz  |
| 3.6           | 15.203          | Antenna Requirement            | Pass               | -                                     |

**Conformity Assessment Condition:**

- 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.
- 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.

**Reviewed by: Lewis Ho**

**Report Producer: Michelle Chen**



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

| Product Feature  |
|--|
| <p><b>General Specs</b><br/>Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac</p> <p><b>Antenna Type</b><br/>WLAN: FPC Loop Antenna<br/>Bluetooth: FPC Loop Antenna</p> |

| Antenna information |                 |      |
|---------------------|-----------------|------|
| 5725 MHz ~ 5850 MHz | Peak Gain (dBi) | 3.01 |

**Remark:** The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

## 1.2 Modification of EUT

No modifications made to the EUT during the testing.

## 1.3 Testing Location

|                           |   |
|---------------------------|---|
| <b>Test Site</b>          | Sporton International Inc. EMC & Wireless Communications Laboratory   |
| <b>Test Site Location</b> | No.52, Huaya 1st Rd., Guishan Dist.,<br>Taoyuan City 333, Taiwan (R.O.C.)<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b><br>CO05-HY (TAF Code: 1190)   |
| <b>Remark</b>             | The AC Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory. |

|                           |  |
|---------------------------|--|
| <b>Test Site</b>          | Sporton International Inc. Wensan Laboratory   |
| <b>Test Site Location</b> | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist.,<br>Taoyuan City 333010, Taiwan (R.O.C.)<br>TEL: +886-3-327-0868<br>FAX: +886-3-327-0855 |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b><br>TH05-HY, 03CH22-HY  |

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

FCC designation No.: TW1190 and TW3786



## 1.4 Applicable Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ ANSI C63.10-2013

**Remark:**

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



## 2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

### 2.1 Carrier Frequency and Channel

| Frequency Band                       | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|--------------------------------------|---------|-------------|---------|-------------|
| 5725-5850 MHz<br>Band 4<br>(U-NII-3) | 149     | 5745        | 157     | 5785        |
|                                      | 151*    | 5755        | 159*    | 5795        |
|                                      | 153     | 5765        | 161     | 5805        |
|                                      | 155#    | 5775        | 165     | 5825        |

**Note:**

- 1. The above Frequency and Channel with "\*" are 802.11n HT40 and 802.11ac VHT40.
- 2. The above Frequency and Channel with "#" are 802.11ac VHT80.

### 2.2 Test Mode

The power for 802.11ac VHT20/ VHT40 mode is smaller than 802.11n mode, so all other conducted and radiated test is covered by 802.11n mode.

The final test modes include the worst data rates for each modulation shown in the table below.

**MIMO Mode**

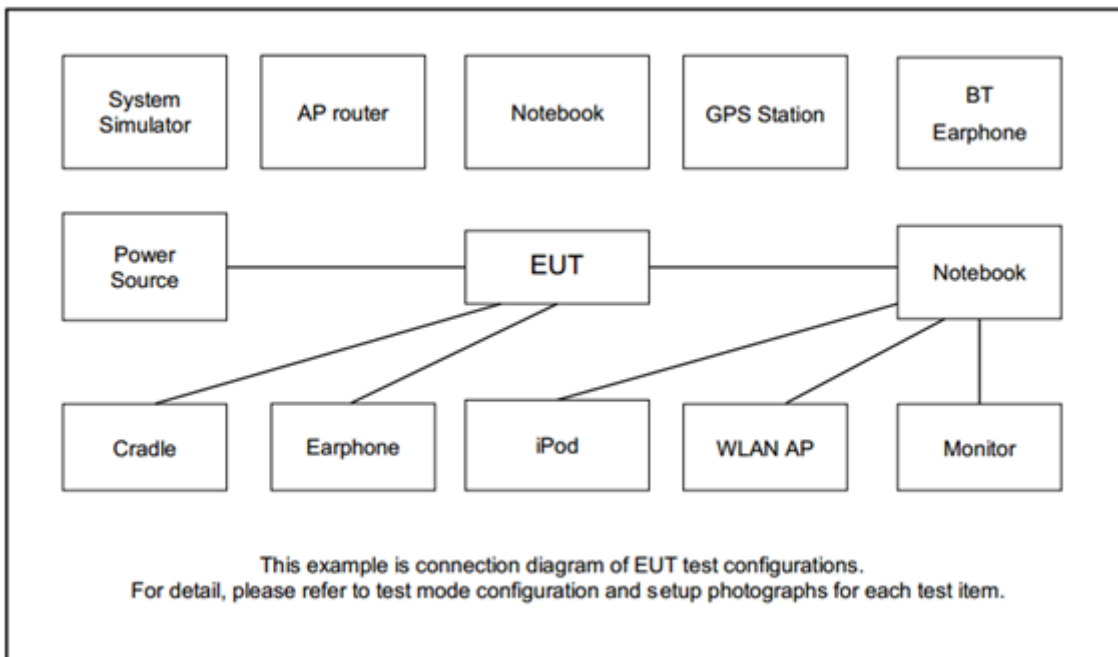
| Modulation                       | Data Rate |
|----------------------------------|-----------|
| 802.11a                          | 6 Mbps    |
| 802.11n HT20                     | MCS0      |
| 802.11n HT40                     | MCS0      |
| 802.11ac VHT20 (Covered by HT20) | MCS0      |
| 802.11ac VHT40 (Covered by HT40) | MCS0      |
| 802.11ac VHT80                   | MCS0      |

| Test Cases   |   |
|--|---|
| <b>AC Conducted Emission</b>   | Mode 1 : WLAN (5GHz) Tx + USB Cable (Type A to C) (Charging from Adapter) |
| <b>Remark:</b> For Radiated Test Cases, the tests were performed with USB Cable (Type A to C). |   |

| Ch. # |        | Band IV : 5725-5850 MHz |              |              |                |
|-------|--------|-------------------------|--------------|--------------|----------------|
|       |        | 802.11a                 | 802.11n HT20 | 802.11n HT40 | 802.11ac VHT80 |
| L     | Low    | 149                     | 149          | 151          | -              |
| M     | Middle | 157                     | 157          | -            | 155            |
| H     | High   | 165                     | 165          | 159          | -              |

**Remark:** For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

### 2.3 Connection Diagram of Test System







## 2.4 Support Unit used in test configuration and system

| Item | Equipment  | Brand Name | Model Name      | FCC ID     | Data Cable | Power Cord   |
|------|------------|------------|-----------------|------------|------------|--|
| 1.   | Notebook   | Lenovo     | MP2CWZYZ        | PD9AX201NG | N/A        | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 2.   | AC Adapter | ASUS       | PA-1100-01      | N/A        | N/A        | N/A  |
| 3.   | AC Adapter | ASUS       | A172-050200U-US | N/A        | N/A        | N/A  |

## 2.5 EUT Operation Test Setup

The RF test items, utility “Tera Term Version 4.95” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

## 2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

### 3 Test Result

#### 3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

##### 3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

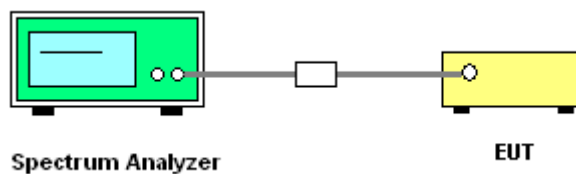
##### 3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

##### 3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth for the band 5.725-5.85 GHz
2. Set RBW = 100 kHz.
3. Set the VBW  $\geq 3 \times$  RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

##### 3.1.4 Test Setup



##### 3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

## 3.2 Maximum Conducted Output Power Measurement

### 3.2.1 Limit of Maximum Conducted Output Power

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

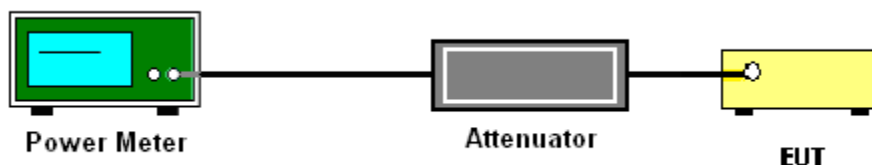
### 3.2.3 Test Procedures

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

### 3.2.4 Test Setup



### 3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



### 3.3 Power Spectral Density Measurement

#### 3.3.1 Limit of Power Spectral Density

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### 3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

#### 3.3.3 Test Procedures

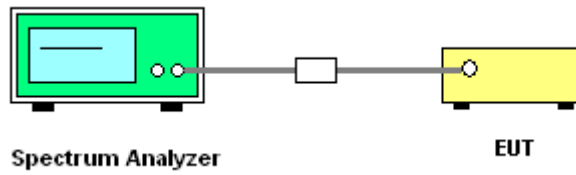
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section F) Maximum power spectral density.

##### # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 300kHz.
  - Set VBW  $\geq$  1 MHz.
  - Add  $10 \log(500 \text{ kHz/RBW})$  to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement
  - Number of points in sweep  $\geq 2 \text{ Span} / \text{RBW}$ .
  - Sweep time = auto.
  - Detector = RMS
  - Trace average at least 100 traces in power averaging mode.
  - Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add  $10 \log(1/0.25) = 6 \text{ dB}$  if the duty cycle is 25 percent.
1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
  2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

### 3.3.4 Test Setup



### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



### 3.4 Unwanted Emissions Measurement

#### 3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5.725-5.85 GHz band:

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(2) Unwanted spurious emissions falls 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                             |

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

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$

| EIRP (dBm) | Field Strength at 3m (dBμV/m) |
|------------|-------------------------------|
| - 27       | 68.3                          |

(3) KDB789033 D02 v02r01 G)2)c)

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.

(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.



### 3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

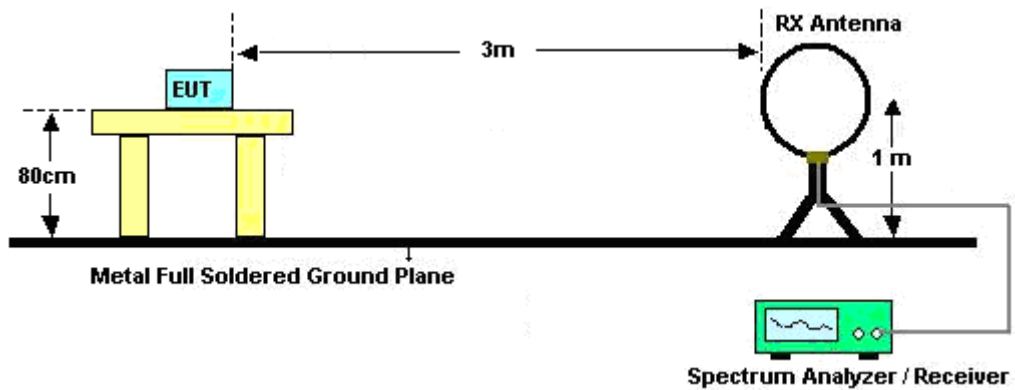
### 3.4.3 Test Procedures

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 1000 MHz
    - 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  $\geq$  3 MHz
    - Detector = Peak
    - Sweep time = auto
    - Trace mode = max hold
  - (3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz
    - RBW = 1 MHz
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW  $\geq$  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.
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is 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 is 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.

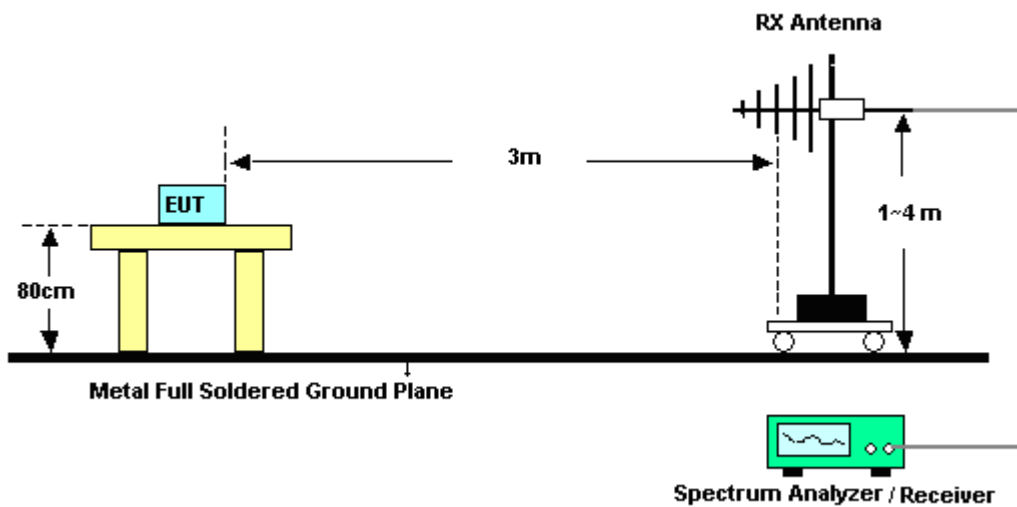
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-”.
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-”.

### 3.4.4 Test Setup

**For radiated emissions below 30MHz**

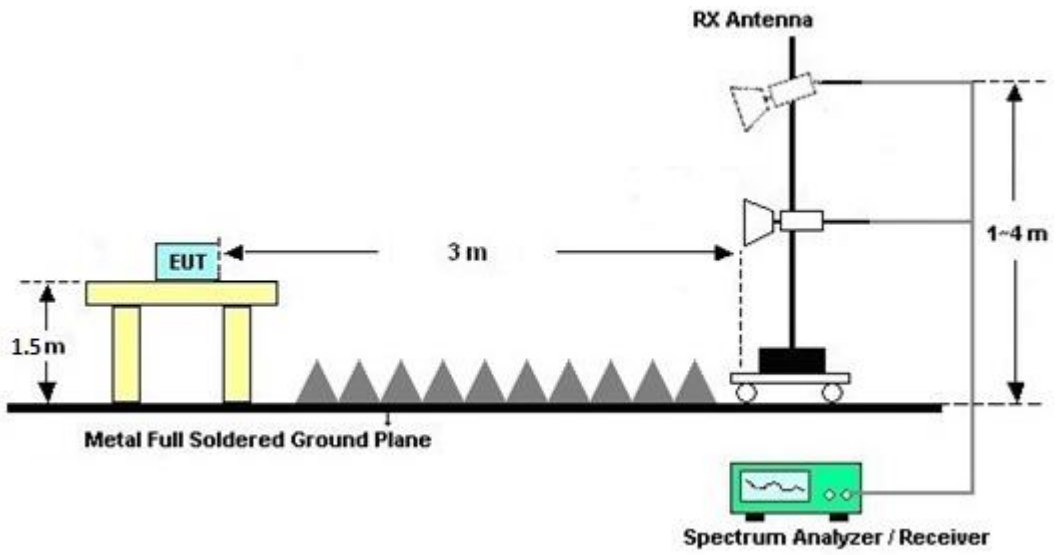


**For radiated emissions from 30MHz to 1GHz**

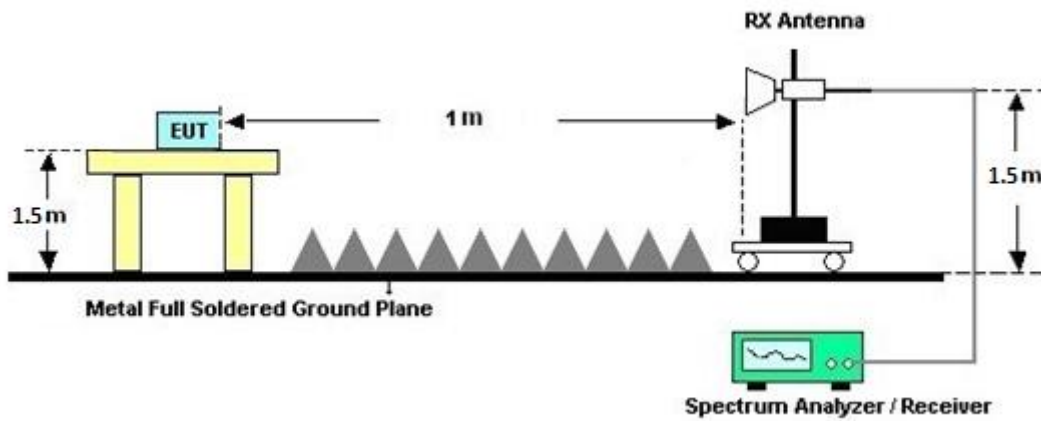




For radiated test from 1GHz to 18GHz



For radiated test above 18GHz





### **3.4.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)**

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

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

### **3.4.6 Test Result of Radiated Band Edges**

Please refer to Appendix C and D.

### **3.4.7 Duty Cycle**

Please refer to Appendix E.

### **3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)**

Please refer to Appendix C and D.



### 3.5 AC Conducted Emission Measurement

#### 3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

| Frequency of emission (MHz) | Conducted limit (dB $\mu$ V) |           |
|-----------------------------|------------------------------|-----------|
|                             | Quasi-peak                   | Average   |
| 0.15-0.5                    | 66 to 56*                    | 56 to 46* |
| 0.5-5                       | 56                           | 46        |
| 5-30                        | 60                           | 50        |

\*Decreases with the logarithm of the frequency.

#### 3.5.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

#### 3.5.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

### 3.5.4 Test Setup



### 3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



## **3.6 Antenna Requirements**

### **3.6.1 Standard Applicable**

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

### **3.6.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.



## 4 List of Measuring Equipment

| Instrument                       | Brand Name      | Model No.                        | Serial No.                     | Characteristics               | Calibration Date | Test Date                       | Due Date      | Remark                   |
|----------------------------------|-----------------|----------------------------------|--------------------------------|-------------------------------|------------------|---------------------------------|---------------|--------------------------|
| Hygrometer                       | TECEPEL         | DTM-303A                         | TP201996                       | N/A                           | Nov. 07, 2023    | Jan. 15, 2024~<br>Feb. 07, 2024 | Nov. 06, 2024 | Conducted<br>(TH05-HY)   |
| Power Sensor                     | DARE            | RPR3006W                         | 17100015SNO<br>36 (NO:35)      | 10MHz~6GHz                    | Aug. 23, 2023    | Jan. 15, 2024~<br>Feb. 07, 2024 | Aug. 22, 2024 | Conducted<br>(TH05-HY)   |
| Signal Analyzer                  | Rohde & Schwarz | FSV40                            | 101564                         | 10Hz ~ 40GHz                  | Sep. 12, 2023    | Jan. 15, 2024~<br>Feb. 07, 2024 | Sep. 11, 2024 | Conducted<br>(TH05-HY)   |
| AC Power Source                  | ChainTek        | APC-1000W                        | N/A                            | N/A                           | N/A              | Mar. 06, 2024                   | N/A           | Conduction<br>(CO05-HY)  |
| EMI Test Receiver                | Rohde & Schwarz | ESR3                             | 102388                         | 9kHz~3.6GHz                   | Dec. 06, 2023    | Mar. 06, 2024                   | Dec. 05, 2024 | Conduction<br>(CO05-HY)  |
| Hygrometer                       | Testo           | 608-H1                           | 34913912                       | N/A                           | Oct. 26, 2023    | Mar. 06, 2024                   | Oct. 25, 2024 | Conduction<br>(CO05-HY)  |
| LISN                             | Rohde & Schwarz | ENV216                           | 100081                         | 9kHz~30MHz                    | Nov. 22, 2023    | Mar. 06, 2024                   | Nov. 21, 2024 | Conduction<br>(CO05-HY)  |
| Software                         | Rohde & Schwarz | EMC32                            | N/A                            | N/A                           | N/A              | Mar. 06, 2024                   | N/A           | Conduction<br>(CO05-HY)  |
| Pulse Limiter                    | SCHWARZBECK     | VTSD 9561-F N                    | 00691                          | N/A                           | Jul. 28, 2023    | Mar. 06, 2024                   | Jul. 27, 2024 | Conduction<br>(CO05-HY)  |
| LISN Cable                       | MVE             | RG-400                           | 260260                         | N/A                           | Dec. 28, 2023    | Mar. 06, 2024                   | Dec. 27, 2024 | Conduction<br>(CO05-HY)  |
| Loop Antenna                     | Rohde & Schwarz | HFH2-Z2                          | 100488                         | 9kHz~30MHz                    | Sep. 12, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Sep. 11, 2024 | Radiation<br>(03CH22-HY) |
| Bilog Antenna with 6dB           | TESEQ & WOKEN   | CBL 6111D & 00802N1D-06          | 63304 & 002                    | 30MHz~1GHz                    | Oct. 15, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Oct. 14, 2024 | Radiation<br>(03CH22-HY) |
| Amplifier                        | SONOMA          | 310N                             | 421581                         | N/A                           | Jul. 15, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Jul. 14, 2024 | Radiation<br>(03CH22-HY) |
| Double Ridged Guide Horn Antenna | RFSPIN          | DRH18-E                          | LE2C04A18EN                    | 1GHz~18GHz                    | Jul. 12, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Jul. 11, 2024 | Radiation<br>(03CH22-HY) |
| SHF-EHF Horn Antenna             | SCHWARZBECK     | BBHA 9170                        | 1223                           | 18GHz-40GHz                   | Jul. 10, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Jul. 09, 2024 | Radiation<br>(03CH22-HY) |
| SHF-EHF Horn Antenna             | SCHWARZBECK     | BBHA 9170                        | 1224                           | 18GHz-40GHz                   | Jul. 10, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Jul. 09, 2024 | Radiation<br>(03CH22-HY) |
| Amplifier                        | EMEC            | EM01G18GA                        | 060877                         | N/A                           | Sep. 28, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Sep. 27, 2024 | Radiation<br>(03CH22-HY) |
| Preamplifier                     | EMEC            | EM18G40G                         | 060801                         | 18-40GHz                      | Jun. 27, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Jun. 26, 2024 | Radiation<br>(03CH22-HY) |
| Signal Analyzer                  | Keysight        | N9010B                           | MY60241058                     | 10Hz~44GHz                    | Jul. 06, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Jul. 05, 2024 | Radiation<br>(03CH22-HY) |
| Hygrometer                       | TECEPEL         | DTM-303A                         | TP211469                       | N/A                           | Jan. 03, 2024    | Jan. 19, 2024~<br>Mar. 05, 2024 | Jan. 02, 2025 | Radiation<br>(03CH22-HY) |
| Controller                       | EMEC            | EM1000                           | N/A                            | Control Turn table & Ant Mast | N/A              | Jan. 19, 2024~<br>Mar. 05, 2024 | N/A           | Radiation<br>(03CH22-HY) |
| Antenna Mast                     | ChainTek        | MBS-520-1                        | N/A                            | 1m~4m                         | N/A              | Jan. 19, 2024~<br>Mar. 05, 2024 | N/A           | Radiation<br>(03CH22-HY) |
| Turn Table                       | ChainTek        | T-200-S-1                        | N/A                            | 0~360 Degree                  | N/A              | Jan. 19, 2024~<br>Mar. 05, 2024 | N/A           | Radiation<br>(03CH22-HY) |
| Software                         | Audix           | E3<br>6.09824_2019122            | RK-002347                      | N/A                           | N/A              | Jan. 19, 2024~<br>Mar. 05, 2024 | N/A           | Radiation<br>(03CH22-HY) |
| RF Cable                         | HUBER + SUHNER  | SUCOFLEX 102                     | 804390/2,8046<br>11/2,804615/2 | N/A                           | Oct. 24, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Oct. 23, 2024 | Radiation<br>(03CH22-HY) |
| Filter                           | Wainwright      | WLK4-1000-1530<br>-8000-40SS     | SN29                           | 1.53GHz Low Pass Filter       | May 23, 2023     | Jan. 19, 2024~<br>Mar. 05, 2024 | May 22, 2024  | Radiation<br>(03CH22-HY) |
| Filter                           | Wainwright      | WHKX8-5872.5-6<br>750-18000-40ST | SN25                           | 6.75GHz High Pass Filter      | Nov. 13, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Nov. 12, 2024 | Radiation<br>(03CH22-HY) |
| Filter                           | Wainwright      | WHKX12-2700-30<br>00-18000-60ST  | SN7                            | N/A                           | Dec. 01, 2023    | Jan. 19, 2024~<br>Mar. 05, 2024 | Nov. 30, 2024 | Radiation<br>(03CH22-HY) |



## 5 Measurement Uncertainty

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

|   |         |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.50 dB |
|---|---------|

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

|   |         |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 6.50 dB |
|---|---------|

### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

|   |         |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.50 dB |
|---|---------|

### Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

|   |         |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.50 dB |
|---|---------|

### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

|   |         |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.40 dB |
|---|---------|

**Appendix A. Test Result of Conducted Test Items**

|                |                       |                    |       |    |
|----------------|-----------------------|--------------------|-------|----|
| Test Engineer: | Shiming Liu           | Temperature:       | 21~25 | °C |
| Test Date:     | 2024/01/15~2024/02/07 | Relative Humidity: | 51~54 | %  |



**TEST RESULTS DATA**  
**6dB and 26dB EBW and 99% OBW**

| U-NII-3 single antenna |           |     |     |             |                     |   |                      |   |                      |   |                                 |           |
|------------------------|-----------|-----|-----|-------------|---------------------|---|----------------------|---|----------------------|---|---------------------------------|-----------|
| Mod.                   | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) |   | 26dB Bandwidth (MHz) |   | 6 dB Bandwidth (MHz) |   | 6 dB Bandwidth Min. Limit (MHz) | Pass/Fail |
|                        |           |     |     |             | Ant 1               | - | Ant 1                | - | Ant 1                | - |                                 |           |
| 11a                    | 6Mbps     | 1   | 149 | 5745        | 17.13               | - | 21.46                | - | 16.33                | - | 0.5                             | Pass      |
| 11a                    | 6Mbps     | 1   | 157 | 5785        | 17.08               | - | 21.68                | - | 16.32                | - | 0.5                             | Pass      |
| 11a                    | 6Mbps     | 1   | 165 | 5825        | 17.03               | - | 21.71                | - | 16.32                | - | 0.5                             | Pass      |
| HT20                   | MCS0      | 1   | 149 | 5745        | 18.08               | - | 21.68                | - | 17.55                | - | 0.5                             | Pass      |
| HT20                   | MCS0      | 1   | 157 | 5785        | 18.13               | - | 21.76                | - | 17.54                | - | 0.5                             | Pass      |
| HT20                   | MCS0      | 1   | 165 | 5825        | 18.08               | - | 21.67                | - | 17.55                | - | 0.5                             | Pass      |
| HT40                   | MCS0      | 1   | 151 | 5755        | 36.66               | - | 40.93                | - | 36.07                | - | 0.5                             | Pass      |
| HT40                   | MCS0      | 1   | 159 | 5795        | 36.66               | - | 40.83                | - | 36.02                | - | 0.5                             | Pass      |
| VHT80                  | MCS0      | 1   | 155 | 5775        | 75.64               | - | 82.02                | - | 75.20                | - | 0.5                             | Pass      |

**TEST RESULTS DATA**  
**Average Power Table**

| U-NII-3 single antenna |           |     |     |             |                               |   |     |                                 |   |          |   |           |
|------------------------|-----------|-----|-----|-------------|-------------------------------|---|-----|---------------------------------|---|----------|---|-----------|
| Mod.                   | Data Rate | NTX | CH. | Freq. (MHz) | Average Conducted Power (dBm) |   |     | FCC Conducted Power Limit (dBm) |   | DG (dBi) |   | Pass/Fail |
|                        |           |     |     |             | Ant 1                         | - | SUM | Ant 1                           | - | Ant 1    | - |           |
| 11a                    | 6Mbps     | 1   | 149 | 5745        | 10.30                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| 11a                    | 6Mbps     | 1   | 157 | 5785        | 10.40                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| 11a                    | 6Mbps     | 1   | 165 | 5825        | 10.30                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| HT20                   | MCS0      | 1   | 149 | 5745        | 10.50                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| HT20                   | MCS0      | 1   | 157 | 5785        | 10.40                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| HT20                   | MCS0      | 1   | 165 | 5825        | 10.50                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| HT40                   | MCS0      | 1   | 151 | 5755        | 10.40                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| HT40                   | MCS0      | 1   | 159 | 5795        | 10.50                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| VHT20                  | MCS0      | 1   | 149 | 5745        | 10.40                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| VHT20                  | MCS0      | 1   | 157 | 5785        | 10.30                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| VHT20                  | MCS0      | 1   | 165 | 5825        | 10.40                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| VHT40                  | MCS0      | 1   | 151 | 5755        | 10.30                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| VHT40                  | MCS0      | 1   | 159 | 5795        | 10.40                         | - |     | 30.00                           | - | 3.01     | - | Pass      |
| VHT80                  | MCS0      | 1   | 155 | 5775        | 10.40                         | - |     | 30.00                           | - | 3.01     | - | Pass      |

**TEST RESULTS DATA**  
**Power Spectral Density**

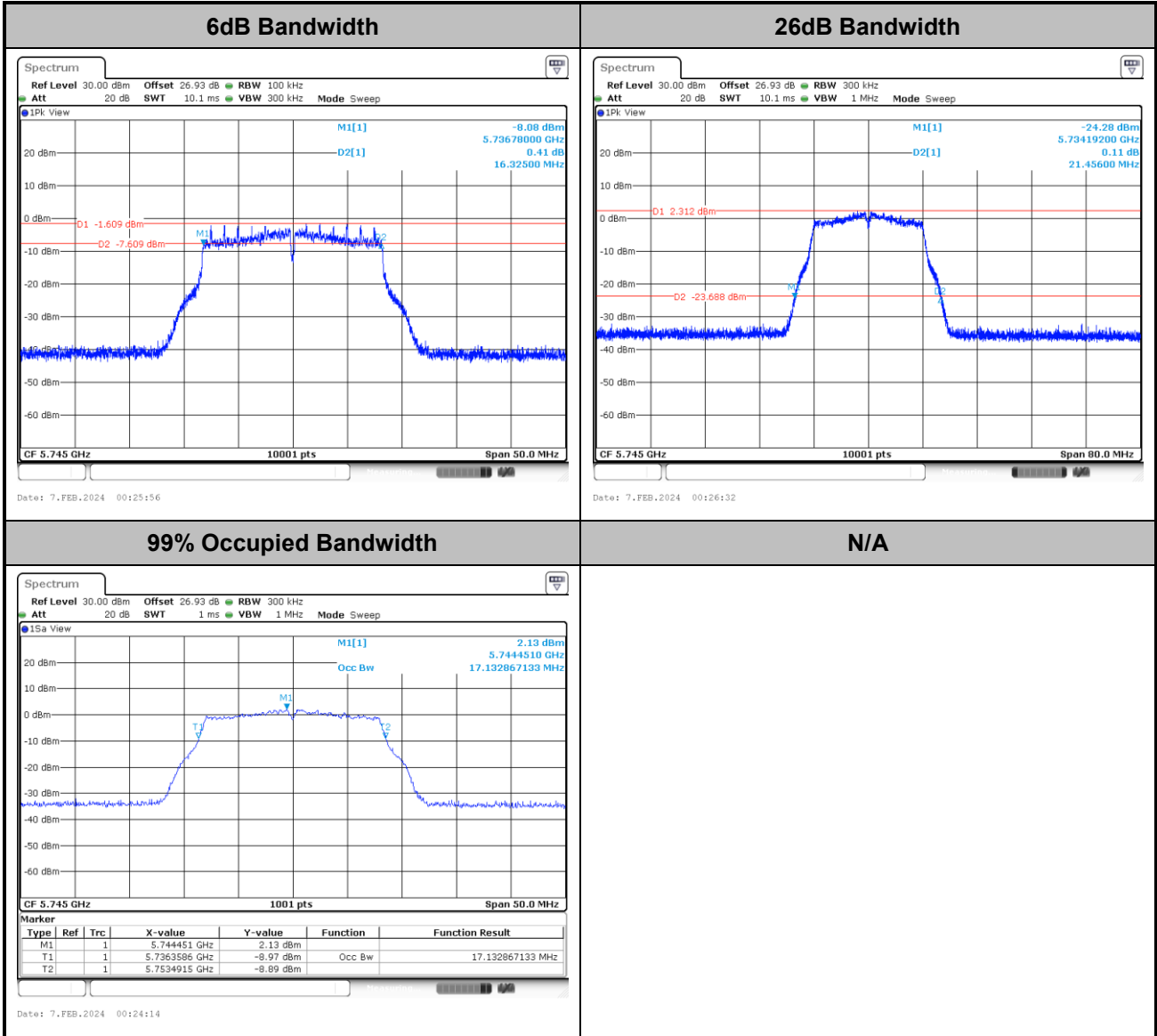
| U-NII-3 single antenna |           |     |     |             |                                 |   |   |   |     |                                |   |          |   |            |
|------------------------|-----------|-----|-----|-------------|---------------------------------|---|---|---|-----|--------------------------------|---|----------|---|------------|
| Mod.                   | Data Rate | NTX | CH. | Freq. (MHz) | 10log (500kHz /RBW) Factor (dB) |   | Average Power Density with Duty Factor (dBm/500kHz) |   |     | Average PSD Limit (dBm/500kHz) |   | DG (dBi) |   | Pass /Fail |
|                        |           |     |     |             | Ant 1                           | - | Ant 1   | - | SUM | Ant 1                          | - | Ant 1    | - |            |
| 11a                    | 6Mbps     | 1   | 149 | 5745        | 2.22                            | - | -2.78   | - |     | 30.00                          | - | 3.01     | - | Pass       |
| 11a                    | 6Mbps     | 1   | 157 | 5785        | 2.22                            | - | -2.75   | - |     | 30.00                          | - | 3.01     | - | Pass       |
| 11a                    | 6Mbps     | 1   | 165 | 5825        | 2.22                            | - | -2.66   | - |     | 30.00                          | - | 3.01     | - | Pass       |
| HT20                   | MCS0      | 1   | 149 | 5745        | 2.22                            | - | -2.51   | - |     | 30.00                          | - | 3.01     | - | Pass       |
| HT20                   | MCS0      | 1   | 157 | 5785        | 2.22                            | - | -2.82   | - |     | 30.00                          | - | 3.01     | - | Pass       |
| HT20                   | MCS0      | 1   | 165 | 5825        | 2.22                            | - | -2.49   | - |     | 30.00                          | - | 3.01     | - | Pass       |
| HT40                   | MCS0      | 1   | 151 | 5755        | 2.22                            | - | -5.97   | - |     | 30.00                          | - | 3.01     | - | Pass       |
| HT40                   | MCS0      | 1   | 159 | 5795        | 2.22                            | - | -6.36   | - |     | 30.00                          | - | 3.01     | - | Pass       |
| VHT80                  | MCS0      | 1   | 155 | 5775        | 2.22                            | - | -8.72   | - |     | 30.00                          | - | 3.01     | - | Pass       |

Note: PSD Sum = Max PSD(Ant. 1, Ant. 2) + 10 log (n)



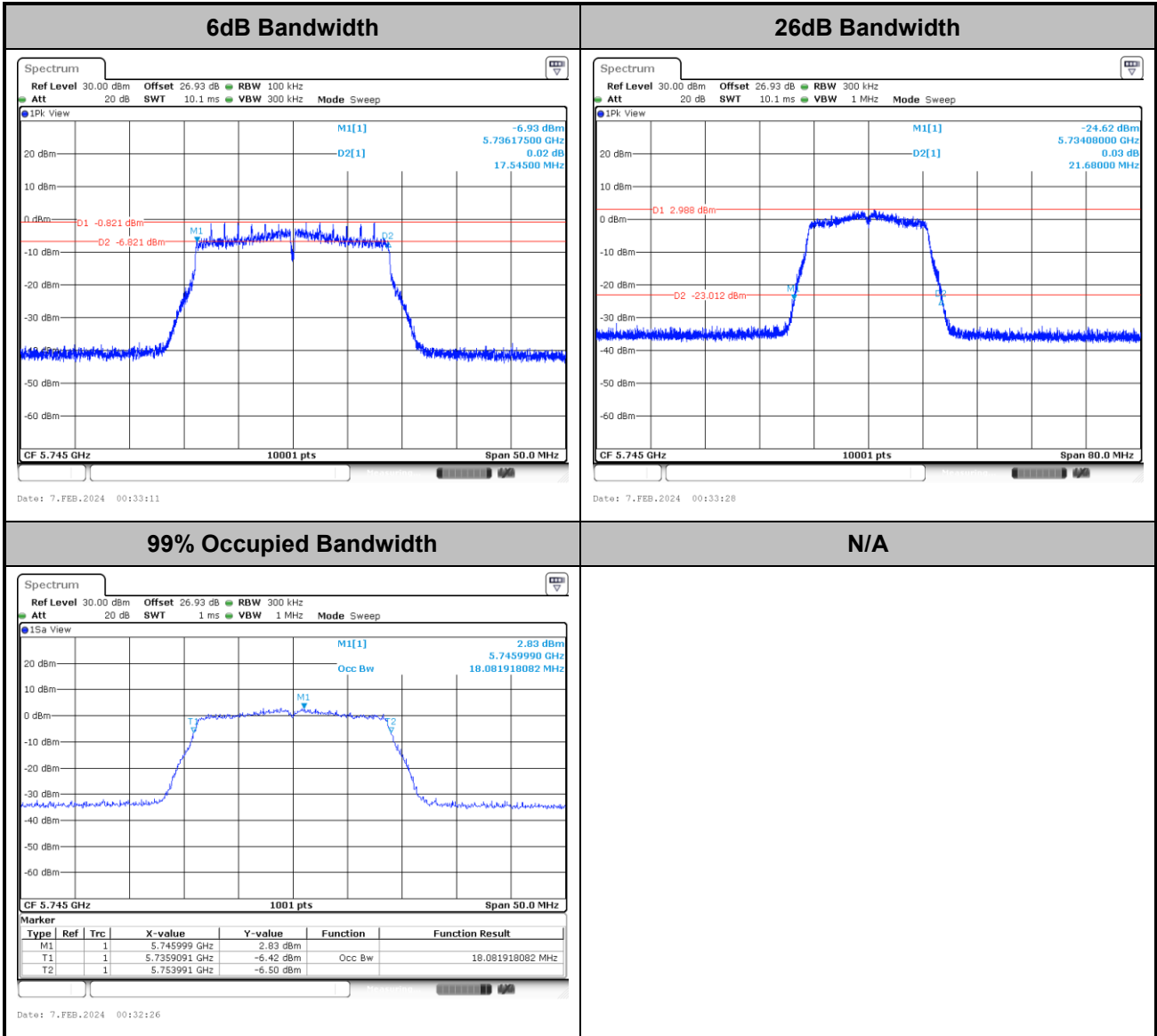
Test Result of 6dB and 26dB and 99% Occupied Bandwidth

<802.11a>



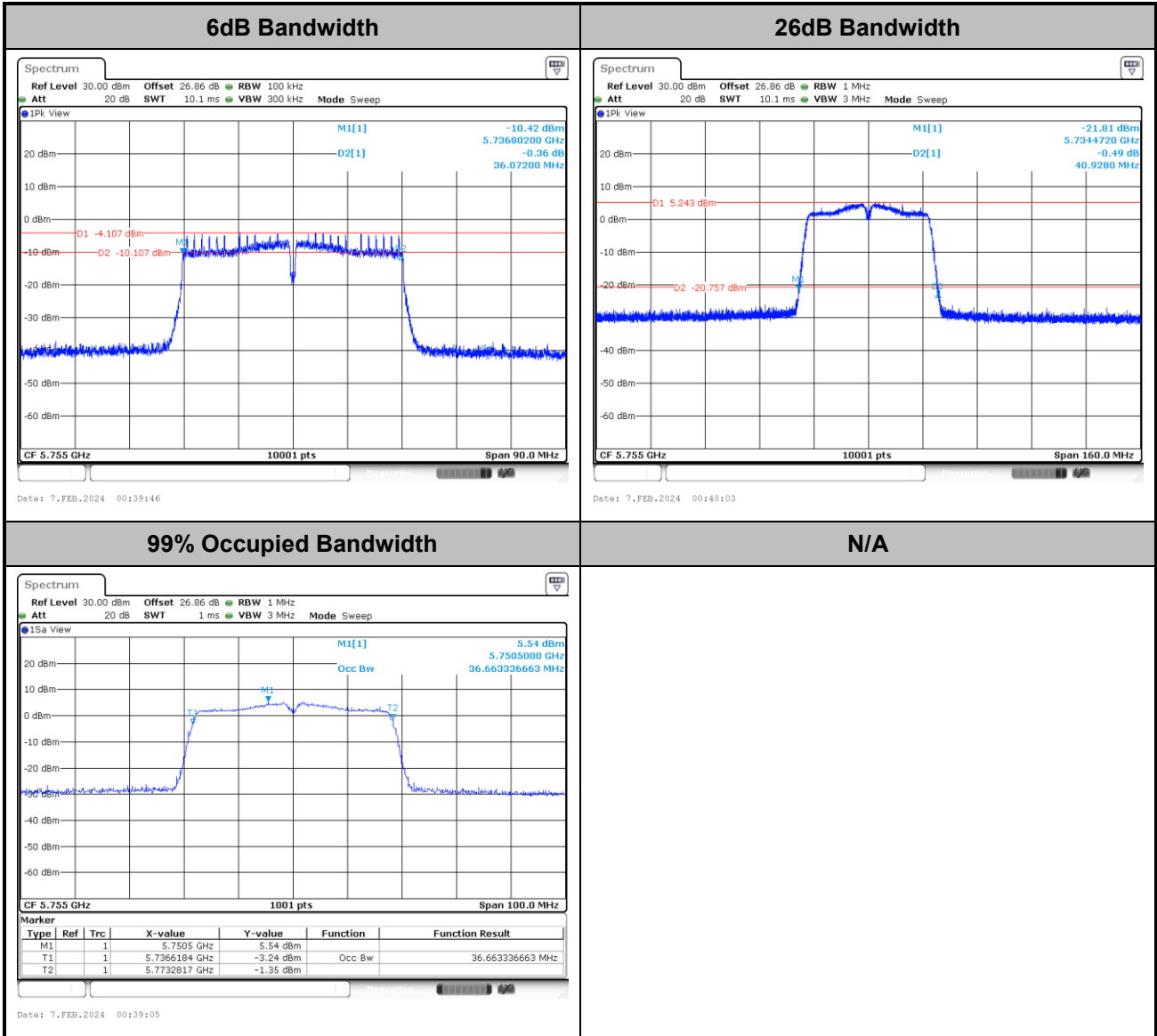


<802.11n HT20>



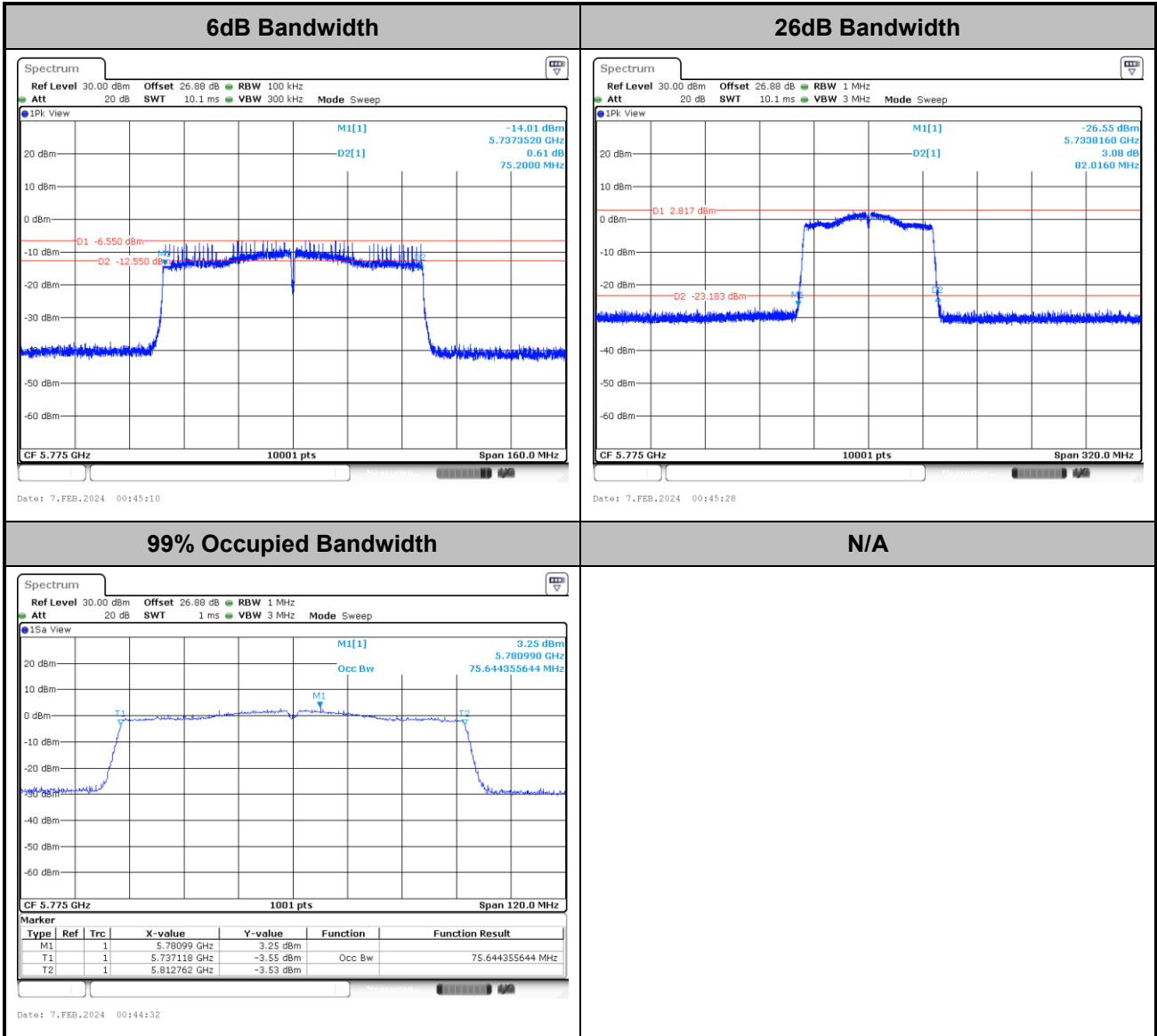


<802.11n HT40>





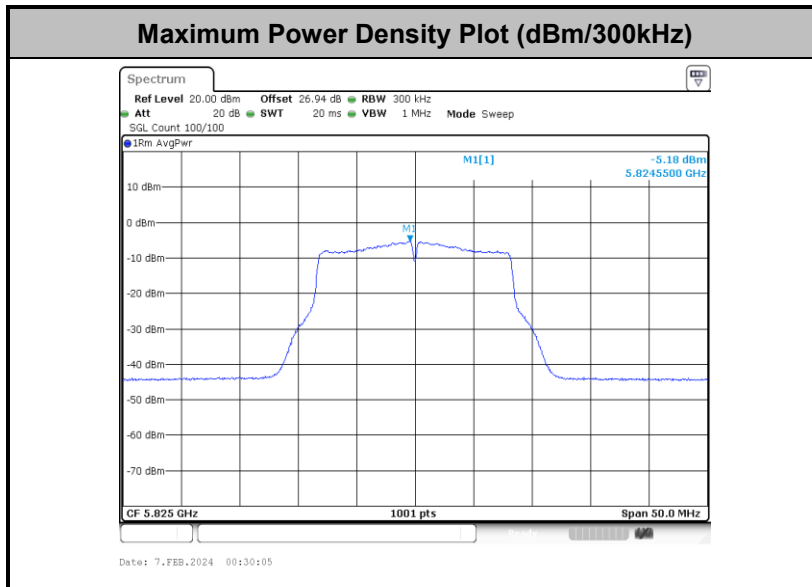
<802.11ac VHT80>



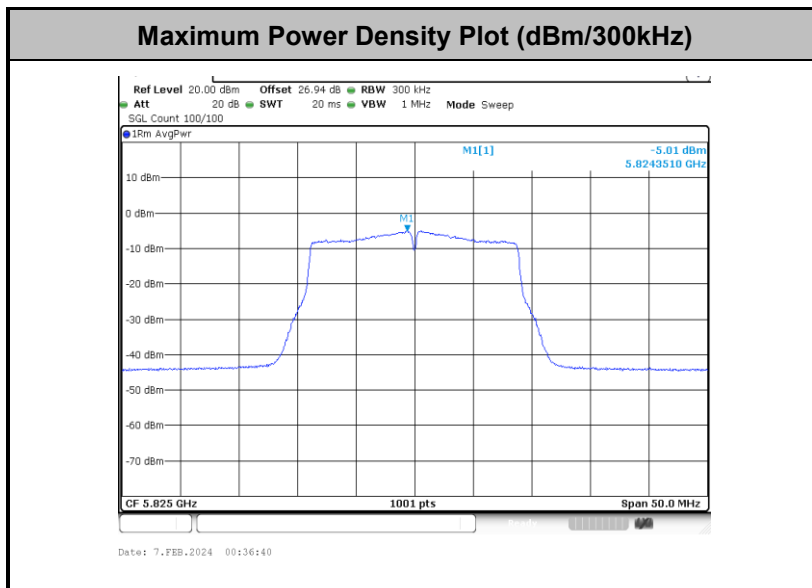


Test Result of Power Spectral Density

<802.11a>



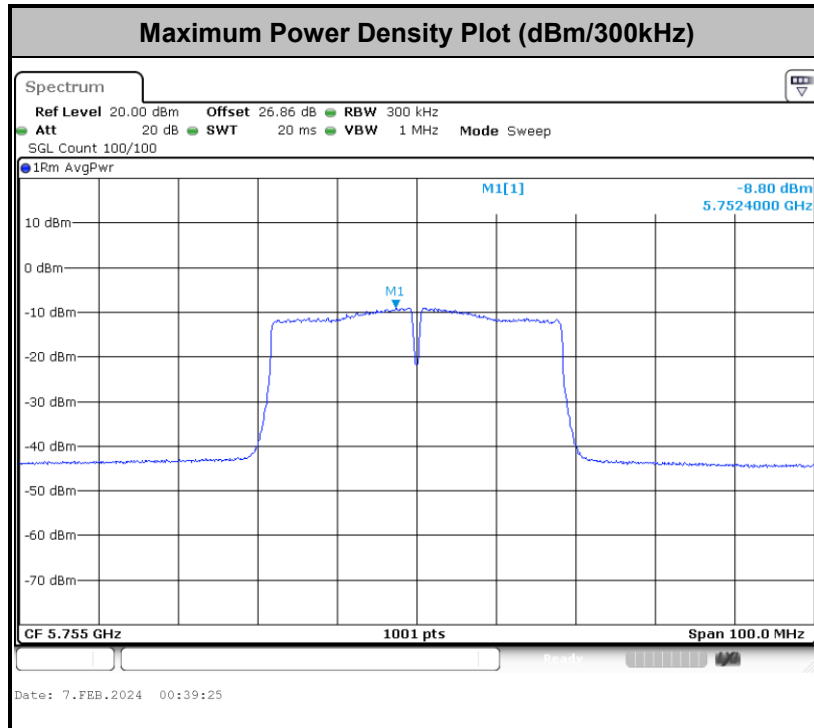
<802.11n HT20>



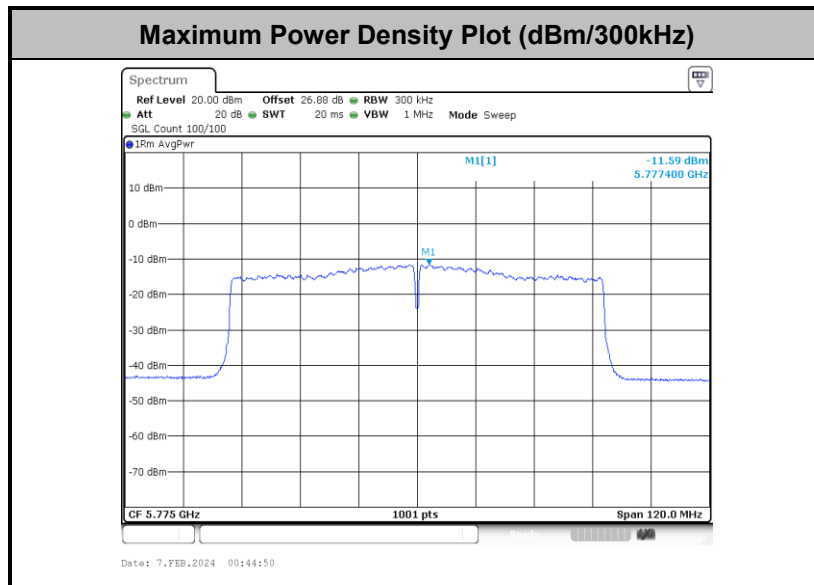




<802.11n HT40>



<802.11ac VHT80>





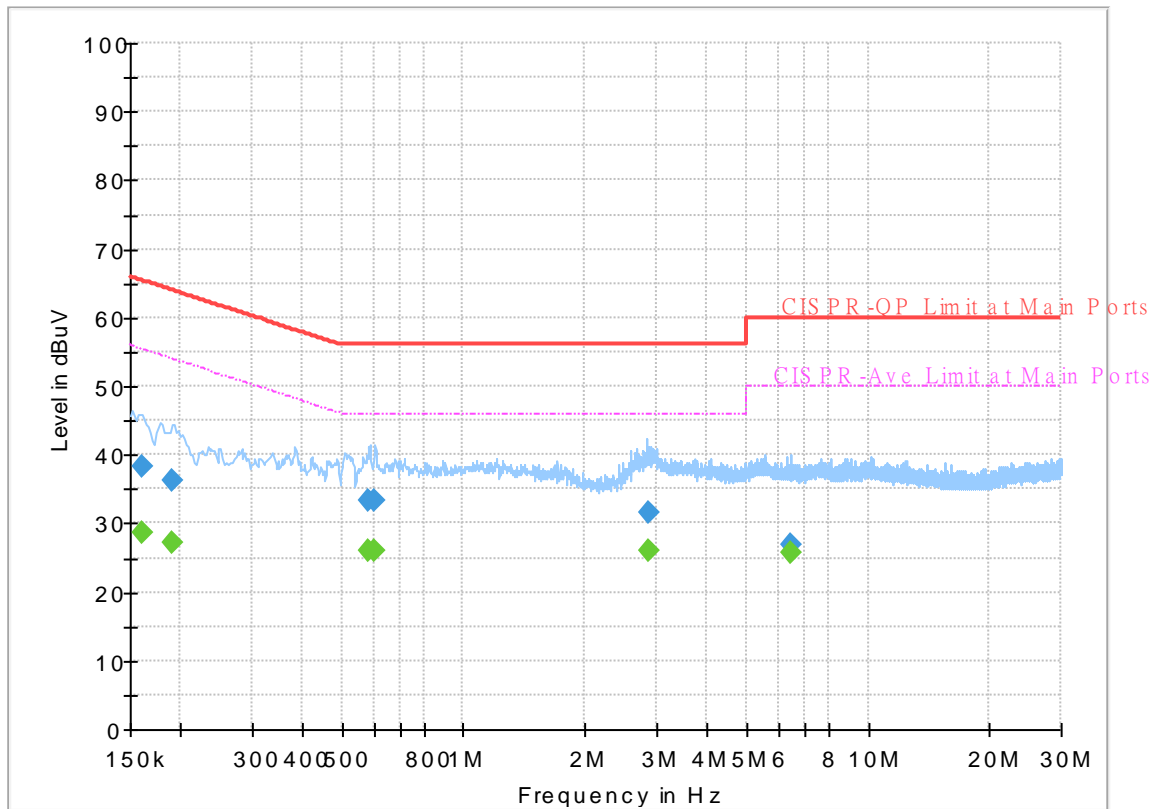
## Appendix B. AC Conducted Emission Test Results

|                 |             |                     |         |
|-----------------|-------------|---------------------|---------|
| Test Engineer : | Calvin Wang | Temperature :       | 23~26°C |
|                 |             | Relative Humidity : | 45~55%  |

## EUT Information

Report NO : 3D2932  
 Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Line

Full Spectrum



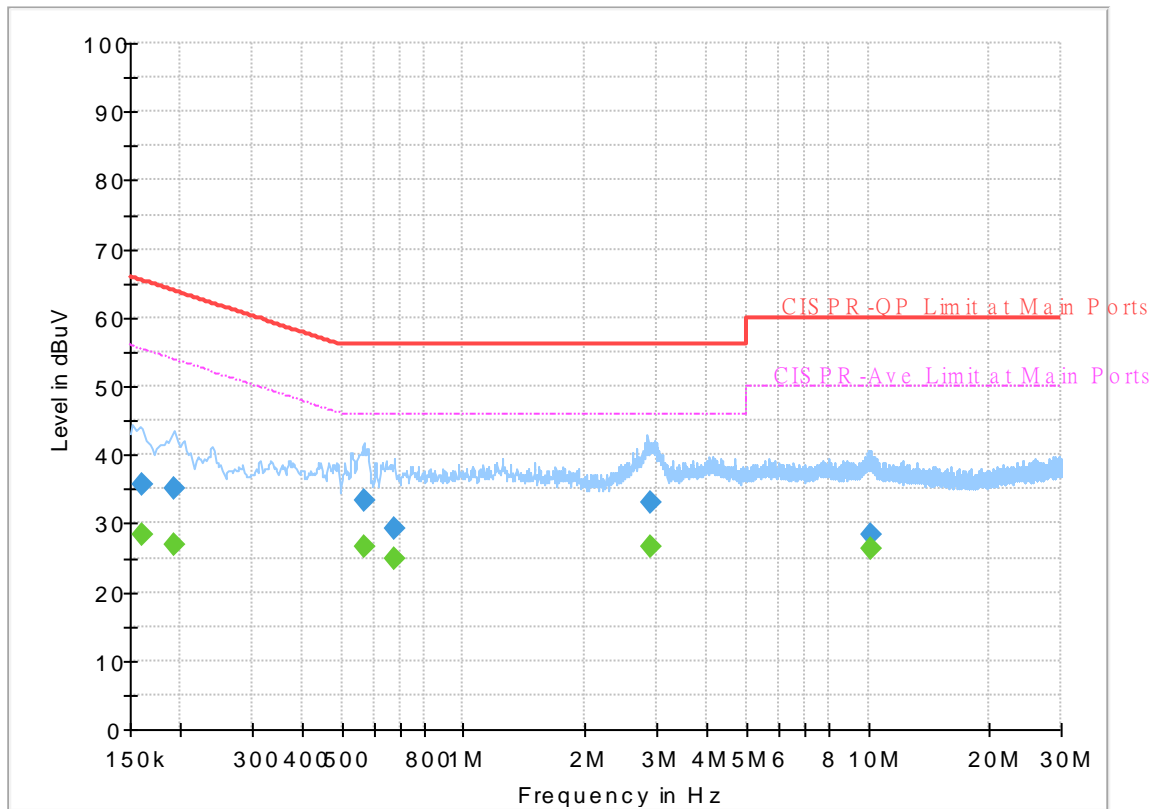
## Final\_Result

| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|------|--------|------------|
| 0.161250        | ---              | 28.64           | 55.40        | 26.76       | L1   | OFF    | 19.8       |
| 0.161250        | 38.20            | ---             | 65.40        | 27.20       | L1   | OFF    | 19.8       |
| 0.190500        | ---              | 27.13           | 54.02        | 26.89       | L1   | OFF    | 19.8       |
| 0.190500        | 36.22            | ---             | 64.02        | 27.80       | L1   | OFF    | 19.8       |
| 0.582000        | ---              | 26.15           | 46.00        | 19.85       | L1   | OFF    | 19.8       |
| 0.582000        | 33.47            | ---             | 56.00        | 22.53       | L1   | OFF    | 19.8       |
| 0.602250        | ---              | 26.13           | 46.00        | 19.87       | L1   | OFF    | 19.8       |
| 0.602250        | 33.34            | ---             | 56.00        | 22.66       | L1   | OFF    | 19.8       |
| 2.877000        | ---              | 26.15           | 46.00        | 19.85       | L1   | OFF    | 19.9       |
| 2.877000        | 31.71            | ---             | 56.00        | 24.29       | L1   | OFF    | 19.9       |
| 6.454500        | ---              | 25.61           | 50.00        | 24.39       | L1   | OFF    | 20.0       |
| 6.454500        | 27.01            | ---             | 60.00        | 32.99       | L1   | OFF    | 20.0       |

## EUT Information

Report NO : 3D2932  
 Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Neutral

Full Spectrum



## Final\_Result

| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|------|--------|------------|
| 0.161250        | ---              | 28.24           | 55.40        | 27.16       | N    | OFF    | 19.8       |
| 0.161250        | 35.76            | ---             | 65.40        | 29.64       | N    | OFF    | 19.8       |
| 0.192750        | ---              | 26.86           | 53.92        | 27.06       | N    | OFF    | 19.8       |
| 0.192750        | 35.00            | ---             | 63.92        | 28.92       | N    | OFF    | 19.8       |
| 0.566250        | ---              | 26.70           | 46.00        | 19.30       | N    | OFF    | 19.8       |
| 0.566250        | 33.21            | ---             | 56.00        | 22.79       | N    | OFF    | 19.8       |
| 0.674250        | ---              | 24.82           | 46.00        | 21.18       | N    | OFF    | 19.8       |
| 0.674250        | 29.17            | ---             | 56.00        | 26.83       | N    | OFF    | 19.8       |
| 2.917500        | ---              | 26.56           | 46.00        | 19.44       | N    | OFF    | 19.9       |
| 2.917500        | 33.12            | ---             | 56.00        | 22.88       | N    | OFF    | 19.9       |
| 10.198500       | ---              | 26.25           | 50.00        | 23.75       | N    | OFF    | 20.2       |
| 10.198500       | 28.49            | ---             | 60.00        | 31.51       | N    | OFF    | 20.2       |



### Appendix C. Radiated Spurious Emission

|                 |                                     |                     |         |
|-----------------|-------------------------------------|---------------------|---------|
| Test Engineer : | Bank Lin, Ken Kuo and Lucifer Jiang | Temperature :       | 20~23°C |
|                 |                                     | Relative Humidity : | 42~55%  |

**Band 4 - 5725~5850MHz**

**WIFI 802.11a (Band Edge @ 3m)**

| WIFI                         | Note | Frequency | Level      | Margin | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |   |
|------------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|---|
| Ant.                         |      |           |            |        | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |   |
| 1                            |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |   |
| 802.11a<br>CH 149<br>5745MHz |      | 5645.675  | 50.16      | -18.04 | 68.2       | 37.6     | 33.47    | 13.44  | 34.35  | 100    | 11      | P       | H       |   |
|                              |      | 5699.9    | 60.21      | -44.92 | 105.13     | 47.38    | 33.7     | 13.52  | 34.39  | 100    | 11      | P       | H       |   |
|                              |      | 5719.925  | 73.4       | -37.38 | 110.78     | 60.44    | 33.82    | 13.55  | 34.41  | 100    | 11      | P       | H       |   |
|                              |      | 5721.95   | 70.31      | -44.94 | 115.25     | 57.34    | 33.83    | 13.55  | 34.41  | 100    | 11      | P       | H       |   |
|                              | *    | 5745      | 107.97     | -      | -          | 94.84    | 33.97    | 13.59  | 34.43  | 100    | 11      | P       | H       |   |
|                              | *    | 5745      | 101.02     | -      | -          | 87.89    | 33.97    | 13.59  | 34.43  | 100    | 11      | A       | H       |   |
|                              |      |           |            |        |            |          |          |        |        |        |         |         |         | H |
|                              |      |           |            |        |            |          |          |        |        |        |         |         |         | H |
|                              |      |           | 5606.3     | 50.83  | -17.37     | 68.2     | 38.53    | 33.24  | 13.38  | 34.32  | 100     | 272     | P       | V |
|                              |      |           | 5696.975   | 54.83  | -48.14     | 102.97   | 42.01    | 33.69  | 13.52  | 34.39  | 100     | 272     | P       | V |
|                              |      |           | 5719.925   | 70.17  | -40.61     | 110.78   | 57.21    | 33.82  | 13.55  | 34.41  | 100     | 272     | P       | V |
|                              |      |           | 5723.75    | 71.39  | -47.96     | 119.35   | 58.4     | 33.84  | 13.56  | 34.41  | 100     | 272     | P       | V |
|                              | *    |           | 5745       | 107.83 | -          | -        | 94.7     | 33.97  | 13.59  | 34.43  | 100     | 272     | P       | V |
|                              | *    |           | 5745       | 100.77 | -          | -        | 87.64    | 33.97  | 13.59  | 34.43  | 100     | 272     | A       | V |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |   |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |   |



| WIFI Ant. 1    | Note | Frequency ( MHz ) | Level ( dBµV/m ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level ( dBµV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |
|----------------|------|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|
|                |      | 5637.75           | 51.27            | -16.93        | 68.2                  | 38.75               | 33.43                   | 13.43            | 34.34                | 100            | 321               | P                 | H            |
|                |      | 5650.5            | 51.66            | -16.91        | 68.57                 | 39.06               | 33.5                    | 13.45            | 34.35                | 100            | 321               | P                 | H            |
|                |      | 5715.25           | 51.95            | -57.52        | 109.47                | 39.02               | 33.79                   | 13.54            | 34.4                 | 100            | 321               | P                 | H            |
|                |      | 5722.75           | 52.68            | -64.39        | 117.07                | 39.7                | 33.84                   | 13.55            | 34.41                | 100            | 321               | P                 | H            |
|                | *    | 5785              | 107.6            | -             | -                     | 94.41               | 34                      | 13.65            | 34.46                | 100            | 321               | P                 | H            |
|                | *    | 5785              | 100.4            | -             | -                     | 87.21               | 34                      | 13.65            | 34.46                | 100            | 321               | A                 | H            |
|                |      | 5854              | 52.7             | -60.38        | 113.08                | 39.59               | 33.91                   | 13.71            | 34.51                | 100            | 321               | P                 | H            |
|                |      | 5872              | 52.07            | -53.97        | 106.04                | 38.93               | 33.94                   | 13.72            | 34.52                | 100            | 321               | P                 | H            |
|                |      | 5876.25           | 52.04            | -52.23        | 104.27                | 38.9                | 33.95                   | 13.72            | 34.53                | 100            | 321               | P                 | H            |
|                |      | 5941.25           | 52.08            | -16.12        | 68.2                  | 38.89               | 34                      | 13.77            | 34.58                | 100            | 321               | P                 | H            |
|                |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
|                |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| <b>802.11a</b> |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |
| <b>CH 157</b>  |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |
| <b>5785MHz</b> |      | 5648.25           | 51.49            | -16.71        | 68.2                  | 38.91               | 33.49                   | 13.44            | 34.35                | 100            | 276               | P                 | V            |
|                |      | 5669.5            | 51.32            | -31.35        | 82.67                 | 38.64               | 33.58                   | 13.47            | 34.37                | 100            | 276               | P                 | V            |
|                |      | 5711.75           | 51.91            | -56.58        | 108.49                | 39                  | 33.77                   | 13.54            | 34.4                 | 100            | 276               | P                 | V            |
|                |      | 5723.5            | 52.3             | -66.48        | 118.78                | 39.31               | 33.84                   | 13.56            | 34.41                | 100            | 276               | P                 | V            |
|                | *    | 5785              | 106.58           | -             | -                     | 93.39               | 34                      | 13.65            | 34.46                | 100            | 276               | P                 | V            |
|                | *    | 5785              | 99.76            | -             | -                     | 86.57               | 34                      | 13.65            | 34.46                | 100            | 276               | A                 | V            |
|                |      | 5852              | 51.57            | -66.07        | 117.64                | 38.47               | 33.9                    | 13.71            | 34.51                | 100            | 276               | P                 | V            |
|                |      | 5871.75           | 51.27            | -54.84        | 106.11                | 38.13               | 33.94                   | 13.72            | 34.52                | 100            | 276               | P                 | V            |
|                |      | 5902              | 51.28            | -33.9         | 85.18                 | 38.09               | 34                      | 13.74            | 34.55                | 100            | 276               | P                 | V            |
|                |      | 5933.75           | 51.69            | -16.51        | 68.2                  | 38.5                | 34                      | 13.76            | 34.57                | 100            | 276               | P                 | V            |
|                |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |
|                |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |



| WiFi Ant. 1                           | Note          | Frequency ( MHz )   | Level ( dBµV/m ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level ( dBµV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|---------------------------------------|---------------|---|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| <b>802.11a<br/>CH 165<br/>5825MHz</b> | *             | 5825  | 107.64           | -             | -                     | 94.49               | 33.95                   | 13.69            | 34.49                | 100            | 325               | P                 | H            |   |
|                                       | *             | 5825  | 100.77           | -             | -                     | 87.62               | 33.95                   | 13.69            | 34.49                | 100            | 325               | A                 | H            |   |
|                                       |               | 5851.6  | 65.77            | -52.78        | 118.55                | 52.67               | 33.9                    | 13.71            | 34.51                | 100            | 325               | P                 | H            |   |
|                                       |               | 5855.8  | 62.16            | -48.42        | 110.58                | 49.05               | 33.91                   | 13.71            | 34.51                | 100            | 325               | P                 | H            |   |
|                                       |               | 5877.4  | 53.72            | -49.7         | 103.42                | 40.58               | 33.95                   | 13.72            | 34.53                | 100            | 325               | P                 | H            |   |
|                                       |               | 5938.6  | 51.27            | -16.93        | 68.2                  | 38.07               | 34                      | 13.77            | 34.57                | 100            | 325               | P                 | H            |   |
|                                       |               |   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | H |
|                                       |               |   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | H |
|                                       | *             | 5825  | 107.1            | -             | -                     | 93.95               | 33.95                   | 13.69            | 34.49                | 100            | 261               | P                 | V            |   |
|                                       | *             | 5825  | 100.56           | -             | -                     | 87.41               | 33.95                   | 13.69            | 34.49                | 100            | 261               | A                 | V            |   |
|                                       |               | 5850.4  | 65.14            | -56.15        | 121.29                | 52.04               | 33.9                    | 13.71            | 34.51                | 100            | 261               | P                 | V            |   |
|                                       |               | 5855.2  | 60.81            | -49.93        | 110.74                | 47.7                | 33.91                   | 13.71            | 34.51                | 100            | 261               | P                 | V            |   |
|                                       |               | 5876.6  | 53.02            | -50.99        | 104.01                | 39.88               | 33.95                   | 13.72            | 34.53                | 100            | 261               | P                 | V            |   |
|                                       |               | 5949.6  | 50.96            | -17.24        | 68.2                  | 37.77               | 34                      | 13.77            | 34.58                | 100            | 261               | P                 | V            |   |
|                                       |               |   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                       |               |   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                       |               |   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                       | <b>Remark</b> | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |   |



Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

| WIFI Ant. 1                  | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|------------------------------|------|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| 802.11a<br>CH 149<br>5745MHz |      | 11490             | 52.97            | -21.03        | 74                    | 33.84               | 38.98                   | 20.12            | 39.97                | -              | -                 | P                 | H            |   |
|                              |      | 11490             | 45.74            | -8.26         | 54                    | 26.61               | 38.98                   | 20.12            | 39.97                | -              | -                 | A                 | H            |   |
|                              |      | 17235             | 52.99            | -15.21        | 68.2                  | 33.97               | 40.57                   | 24.72            | 46.27                | -              | -                 | P                 | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |      |                   | 11490            | 52.6          | -21.4                 | 74                  | 33.47                   | 38.98            | 20.12                | 39.97          | -                 | -                 | P            | V |
|                              |      |                   | 11490            | 45.41         | -8.59                 | 54                  | 26.28                   | 38.98            | 20.12                | 39.97          | -                 | -                 | A            | V |
|                              |      | 17235             | 53.4             | -14.8         | 68.2                  | 34.38               | 40.57                   | 24.72            | 46.27                | -              | -                 | P                 | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                              |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |







| WIFI Ant. 1                  | Note  | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|------------------------------|---|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| 802.11a<br>CH 165<br>5825MHz |   | 11650             | 53.02            | -20.98        | 74                    | 33.89               | 39                      | 20.27            | 40.14                | -              | -                 | P                 | H            |   |
|                              |   | 11650             | 45.68            | -8.32         | 54                    | 26.55               | 39                      | 20.27            | 40.14                | -              | -                 | A                 | H            |   |
|                              |   | 17475             | 53.21            | -14.99        | 68.2                  | 34.22               | 40.6                    | 24.91            | 46.52                | -              | -                 | P                 | H            |   |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                              |   |                   | 11650            | 52.8          | -21.2                 | 74                  | 33.67                   | 39               | 20.27                | 40.14          | -                 | -                 | P            | V |
|                              |   |                   | 11650            | 45.48         | -8.52                 | 54                  | 26.35                   | 39               | 20.27                | 40.14          | -                 | -                 | A            | V |
|                              |   |                   | 17475            | 53.14         | -15.06                | 68.2                | 34.15                   | 40.6             | 24.91                | 46.52          | -                 | -                 | P            | V |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                              |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
| Remark                       | <ol style="list-style-type: none"> <li>No other spurious found.</li> <li>All results are PASS against Peak and Average limit line.</li> <li>The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.</li> </ol> |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |   |



**Band 4 5725~5850MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI Ant. 1                 | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|-----------------------------|------|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| 802.11n HT20 CH 149 5745MHz |      | 5649.5            | 50.77            | -17.43        | 68.2                  | 38.18               | 33.5                    | 13.44            | 34.35                | 100            | 15                | P                 | H            |   |
|                             |      | 5699.675          | 53.38            | -51.58        | 104.96                | 40.55               | 33.7                    | 13.52            | 34.39                | 100            | 15                | P                 | H            |   |
|                             |      | 5718.8            | 64.49            | -45.97        | 110.46                | 51.54               | 33.81                   | 13.55            | 34.41                | 100            | 15                | P                 | H            |   |
|                             |      | 5721.275          | 68.95            | -44.76        | 113.71                | 55.98               | 33.83                   | 13.55            | 34.41                | 100            | 15                | P                 | H            |   |
|                             | *    | 5745              | 107.44           | -             | -                     | 94.31               | 33.97                   | 13.59            | 34.43                | 100            | 15                | P                 | H            |   |
|                             | *    | 5745              | 100.13           | -             | -                     | 87                  | 33.97                   | 13.59            | 34.43                | 100            | 15                | A                 | H            |   |
|                             |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | H |
|                             |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | H |
|                             |      |                   | 5614.625         | 50.18         | -18.02                | 68.2                | 37.83                   | 33.29            | 13.39                | 34.33          | 100               | 274               | P            | V |
|                             |      |                   | 5697.2           | 52.04         | -51.1                 | 103.14              | 39.22                   | 33.69            | 13.52                | 34.39          | 100               | 274               | P            | V |
|                             |      |                   | 5718.575         | 66.97         | -43.43                | 110.4               | 54.02                   | 33.81            | 13.55                | 34.41          | 100               | 274               | P            | V |
|                             |      |                   | 5720.6           | 67.97         | -44.2                 | 112.17              | 55.01                   | 33.82            | 13.55                | 34.41          | 100               | 274               | P            | V |
|                             | *    |                   | 5745             | 106.47        | -                     | -                   | 93.34                   | 33.97            | 13.59                | 34.43          | 100               | 274               | P            | V |
|                             | *    |                   | 5745             | 100.01        | -                     | -                   | 86.88                   | 33.97            | 13.59                | 34.43          | 100               | 274               | A            | V |
|                             |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                             |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |



| WIFI Ant. 1 | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |
|-------------|------|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|
|             |      | 5635.75           | 51.14            | -17.06        | 68.2                  | 38.65               | 33.41                   | 13.42            | 34.34                | 100            | 327               | P                 | H            |
|             |      | 5651.5            | 51.74            | -17.57        | 69.31                 | 39.14               | 33.51                   | 13.45            | 34.36                | 100            | 327               | P                 | H            |
|             |      | 5716.5            | 50.86            | -58.96        | 109.82                | 37.92               | 33.8                    | 13.54            | 34.4                 | 100            | 327               | P                 | H            |
|             |      | 5721.5            | 51.36            | -62.86        | 114.22                | 38.39               | 33.83                   | 13.55            | 34.41                | 100            | 327               | P                 | H            |
|             | *    | 5785              | 106.5            | -             | -                     | 93.31               | 34                      | 13.65            | 34.46                | 100            | 327               | P                 | H            |
|             | *    | 5785              | 99.65            | -             | -                     | 86.46               | 34                      | 13.65            | 34.46                | 100            | 327               | A                 | H            |
|             |      | 5854.5            | 50.7             | -61.24        | 111.94                | 37.59               | 33.91                   | 13.71            | 34.51                | 100            | 327               | P                 | H            |
|             |      | 5861.75           | 51.94            | -56.97        | 108.91                | 38.82               | 33.92                   | 13.71            | 34.51                | 100            | 327               | P                 | H            |
|             |      | 5897.25           | 51.16            | -37.54        | 88.7                  | 37.97               | 33.99                   | 13.74            | 34.54                | 100            | 327               | P                 | H            |
|             |      | 5934.25           | 52.08            | -16.12        | 68.2                  | 38.89               | 34                      | 13.76            | 34.57                | 100            | 327               | P                 | H            |
| 802.11n     |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| HT20        |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| CH 157      |      | 5637.75           | 51.28            | -16.92        | 68.2                  | 38.76               | 33.43                   | 13.43            | 34.34                | 100            | 276               | P                 | V            |
| 5785MHz     |      | 5673.75           | 50.81            | -35.01        | 85.82                 | 38.1                | 33.6                    | 13.48            | 34.37                | 100            | 276               | P                 | V            |
|             |      | 5714.75           | 51.7             | -57.63        | 109.33                | 38.77               | 33.79                   | 13.54            | 34.4                 | 100            | 276               | P                 | V            |
|             |      | 5723.25           | 51.42            | -66.79        | 118.21                | 38.44               | 33.84                   | 13.55            | 34.41                | 100            | 276               | P                 | V            |
|             | *    | 5785              | 106.44           | -             | -                     | 93.25               | 34                      | 13.65            | 34.46                | 100            | 276               | P                 | V            |
|             | *    | 5785              | 99.37            | -             | -                     | 86.18               | 34                      | 13.65            | 34.46                | 100            | 276               | A                 | V            |
|             |      | 5851.25           | 50.66            | -68.69        | 119.35                | 37.56               | 33.9                    | 13.71            | 34.51                | 100            | 276               | P                 | V            |
|             |      | 5873.5            | 51.26            | -54.36        | 105.62                | 38.11               | 33.95                   | 13.72            | 34.52                | 100            | 276               | P                 | V            |
|             |      | 5913.25           | 51.81            | -25.06        | 76.87                 | 38.61               | 34                      | 13.75            | 34.55                | 100            | 276               | P                 | V            |
|             |      | 5931              | 51.58            | -16.62        | 68.2                  | 38.39               | 34                      | 13.76            | 34.57                | 100            | 276               | P                 | V            |
|             |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |
|             |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |



| WiFi Ant. 1                          | Note  | Frequency ( MHz ) | Level ( dBµV/m ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level ( dBµV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|--------------------------------------|---|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| 802.11n<br>HT20<br>CH 165<br>5825MHz | *   | 5825              | 106.98           | -             | -                     | 93.83               | 33.95                   | 13.69            | 34.49                | 100            | 327               | P                 | H            |   |
|                                      | *   | 5825              | 100.09           | -             | -                     | 86.94               | 33.95                   | 13.69            | 34.49                | 100            | 327               | A                 | H            |   |
|                                      |   | 5852.4            | 64.65            | -52.08        | 116.73                | 51.55               | 33.9                    | 13.71            | 34.51                | 100            | 327               | P                 | H            |   |
|                                      |   | 5858              | 57.99            | -51.97        | 109.96                | 44.87               | 33.92                   | 13.71            | 34.51                | 100            | 327               | P                 | H            |   |
|                                      |   | 5878.2            | 53.47            | -49.35        | 102.82                | 40.32               | 33.96                   | 13.72            | 34.53                | 100            | 327               | P                 | H            |   |
|                                      |   | 5925.8            | 51.22            | -16.98        | 68.2                  | 38.02               | 34                      | 13.76            | 34.56                | 100            | 327               | P                 | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | H |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | H |
|                                      | *   | 5825              | 106.94           | -             | -                     | 93.79               | 33.95                   | 13.69            | 34.49                | 100            | 263               | P                 | V            |   |
|                                      | *   | 5825              | 99.18            | -             | -                     | 86.03               | 33.95                   | 13.69            | 34.49                | 100            | 263               | A                 | V            |   |
|                                      |   | 5850              | 58.71            | -63.49        | 122.2                 | 45.62               | 33.9                    | 13.7             | 34.51                | 100            | 263               | P                 | V            |   |
|                                      |   | 5862.6            | 56.65            | -52.02        | 108.67                | 43.53               | 33.93                   | 13.71            | 34.52                | 100            | 263               | P                 | V            |   |
|                                      |   | 5876              | 53.08            | -51.38        | 104.46                | 39.94               | 33.95                   | 13.72            | 34.53                | 100            | 263               | P                 | V            |   |
|                                      |   | 5949.8            | 51.18            | -17.02        | 68.2                  | 37.99               | 34                      | 13.77            | 34.58                | 100            | 263               | P                 | V            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |   |



**Band 4 5725~5850MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI Ant. 1                          | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|--------------------------------------|------|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| 802.11n<br>HT20<br>CH 149<br>5745MHz |      | 11490             | 53.1             | -20.9         | 74                    | 33.97               | 38.98                   | 20.12            | 39.97                | -              | -                 | P                 | H            |   |
|                                      |      | 11490             | 43.15            | -10.85        | 54                    | 24.02               | 38.98                   | 20.12            | 39.97                | -              | -                 | A                 | H            |   |
|                                      |      | 17235             | 53.93            | -14.27        | 68.2                  | 34.91               | 40.57                   | 24.72            | 46.27                | -              | -                 | P                 | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |      |                   | 11490            | 53.5          | -20.5                 | 74                  | 34.37                   | 38.98            | 20.12                | 39.97          | -                 | -                 | P            | V |
|                                      |      |                   | 11490            | 43.75         | -10.25                | 54                  | 24.62                   | 38.98            | 20.12                | 39.97          | -                 | -                 | A            | V |
|                                      |      |                   | 17235            | 54.91         | -13.29                | 68.2                | 35.89                   | 40.57            | 24.72                | 46.27          | -                 | -                 | P            | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |





| WIFI Ant. 1                          | Note  | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|--------------------------------------|---|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| 802.11n<br>HT20<br>CH 165<br>5825MHz |   | 11650             | 53.29            | -20.71        | 74                    | 34.16               | 39                      | 20.27            | 40.14                | -              | -                 | P                 | H            |   |
|                                      |   | 11650             | 45               | -9            | 54                    | 25.87               | 39                      | 20.27            | 40.14                | -              | -                 | A                 | H            |   |
|                                      |   | 17475             | 54.37            | -13.83        | 68.2                  | 35.38               | 40.6                    | 24.91            | 46.52                | -              | -                 | P                 | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   | 11650            | 52.98         | -21.02                | 74                  | 33.85                   | 39               | 20.27                | 40.14          | -                 | -                 | P            | V |
|                                      |   |                   | 11650            | 44.77         | -9.23                 | 54                  | 25.64                   | 39               | 20.27                | 40.14          | -                 | -                 | A            | V |
|                                      |   |                   | 17475            | 54.55         | -13.65                | 68.2                | 35.56                   | 40.6             | 24.91                | 46.52          | -                 | -                 | P            | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
| Remark                               | <ol style="list-style-type: none"> <li>No other spurious found.</li> <li>All results are PASS against Peak and Average limit line.</li> <li>The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.</li> </ol> |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |   |





**Band 4 5725~5850MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI Ant. 1    | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |
|----------------|------|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|
|                |      | 5601.75           | 51.4             | -16.8         | 68.2                  | 39.14               | 33.21                   | 13.37            | 34.32                | 108            | 82                | P                 | H            |
|                |      | 5697.5            | 56.3             | -47.06        | 103.36                | 43.48               | 33.69                   | 13.52            | 34.39                | 108            | 82                | P                 | H            |
|                |      | 5711.25           | 65.05            | -43.3         | 108.35                | 52.14               | 33.77                   | 13.54            | 34.4                 | 108            | 82                | P                 | H            |
|                |      | 5722              | 65.59            | -49.77        | 115.36                | 52.62               | 33.83                   | 13.55            | 34.41                | 108            | 82                | P                 | H            |
|                | *    | 5755              | 102.95           | -             | -                     | 89.78               | 34                      | 13.6             | 34.43                | 108            | 82                | P                 | H            |
|                | *    | 5755              | 96.21            | -             | -                     | 83.04               | 34                      | 13.6             | 34.43                | 108            | 82                | A                 | H            |
|                |      | 5854.25           | 50.7             | -61.81        | 112.51                | 37.59               | 33.91                   | 13.71            | 34.51                | 108            | 82                | P                 | H            |
|                |      | 5863.75           | 51.91            | -56.44        | 108.35                | 38.79               | 33.93                   | 13.71            | 34.52                | 108            | 82                | P                 | H            |
|                |      | 5900.5            | 51.45            | -34.84        | 86.29                 | 38.25               | 34                      | 13.74            | 34.54                | 108            | 82                | P                 | H            |
|                |      | 5941.5            | 50.5             | -17.7         | 68.2                  | 37.31               | 34                      | 13.77            | 34.58                | 108            | 82                | P                 | H            |
| <b>802.11n</b> |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| <b>HT40</b>    |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| <b>CH 151</b>  |      | 5643              | 51.34            | -16.86        | 68.2                  | 38.8                | 33.46                   | 13.43            | 34.35                | 100            | 274               | P                 | V            |
| <b>5755MHz</b> |      | 5690              | 53.41            | -44.42        | 97.83                 | 40.62               | 33.66                   | 13.51            | 34.38                | 100            | 274               | P                 | V            |
|                |      | 5711.25           | 65.46            | -42.89        | 108.35                | 52.55               | 33.77                   | 13.54            | 34.4                 | 100            | 274               | P                 | V            |
|                |      | 5722.25           | 66.06            | -49.87        | 115.93                | 53.09               | 33.83                   | 13.55            | 34.41                | 100            | 274               | P                 | V            |
|                | *    | 5755              | 102.66           | -             | -                     | 89.49               | 34                      | 13.6             | 34.43                | 100            | 274               | P                 | V            |
|                | *    | 5755              | 95.82            | -             | -                     | 82.65               | 34                      | 13.6             | 34.43                | 100            | 274               | A                 | V            |
|                |      | 5855              | 51.97            | -58.83        | 110.8                 | 38.86               | 33.91                   | 13.71            | 34.51                | 100            | 274               | P                 | V            |
|                |      | 5860.25           | 50.75            | -58.58        | 109.33                | 37.63               | 33.92                   | 13.71            | 34.51                | 100            | 274               | P                 | V            |
|                |      | 5901.75           | 51.96            | -33.41        | 85.37                 | 38.77               | 34                      | 13.74            | 34.55                | 100            | 274               | P                 | V            |
|                |      | 5939              | 52.1             | -16.1         | 68.2                  | 38.9                | 34                      | 13.77            | 34.57                | 100            | 274               | P                 | V            |
|                |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |
|                |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |



| WIFI Ant. 1 | Note  | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |
|-------------|---|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|
|             |   | 5639.75           | 50.38            | -17.82        | 68.2                  | 37.86               | 33.44                   | 13.43            | 34.35                | 100            | 323               | P                 | H            |
|             |   | 5694.75           | 51.26            | -50.07        | 101.33                | 38.46               | 33.68                   | 13.51            | 34.39                | 100            | 323               | P                 | H            |
|             |   | 5718.5            | 51.17            | -59.21        | 110.38                | 38.22               | 33.81                   | 13.55            | 34.41                | 100            | 323               | P                 | H            |
|             |   | 5724              | 52.01            | -67.91        | 119.92                | 39.02               | 33.84                   | 13.56            | 34.41                | 100            | 323               | P                 | H            |
|             | *   | 5795              | 102.94           | -             | -                     | 89.74               | 34                      | 13.66            | 34.46                | 100            | 323               | P                 | H            |
|             | *   | 5795              | 96.28            | -             | -                     | 83.08               | 34                      | 13.66            | 34.46                | 100            | 323               | A                 | H            |
|             |   | 5850.25           | 56.8             | -64.83        | 121.63                | 43.7                | 33.9                    | 13.71            | 34.51                | 100            | 323               | P                 | H            |
|             |   | 5865.25           | 54               | -53.93        | 107.93                | 40.87               | 33.93                   | 13.72            | 34.52                | 100            | 323               | P                 | H            |
|             |   | 5887.75           | 53.31            | -42.43        | 95.74                 | 40.13               | 33.98                   | 13.73            | 34.53                | 100            | 323               | P                 | H            |
|             |   | 5925.25           | 52.42            | -15.78        | 68.2                  | 39.22               | 34                      | 13.76            | 34.56                | 100            | 323               | P                 | H            |
| 802.11n     |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| HT40        |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| CH 159      |   | 5610.25           | 50.74            | -17.46        | 68.2                  | 38.41               | 33.26                   | 13.39            | 34.32                | 100            | 275               | P                 | V            |
| 5795MHz     |   | 5694.75           | 51.26            | -50.07        | 101.33                | 38.46               | 33.68                   | 13.51            | 34.39                | 100            | 275               | P                 | V            |
|             |   | 5719.75           | 53.62            | -57.11        | 110.73                | 40.66               | 33.82                   | 13.55            | 34.41                | 100            | 275               | P                 | V            |
|             |   | 5721.25           | 52.01            | -61.64        | 113.65                | 39.04               | 33.83                   | 13.55            | 34.41                | 100            | 275               | P                 | V            |
|             | *   | 5795              | 102.53           | -             | -                     | 89.33               | 34                      | 13.66            | 34.46                | 100            | 275               | P                 | V            |
|             | *   | 5795              | 95.58            | -             | -                     | 82.38               | 34                      | 13.66            | 34.46                | 100            | 275               | A                 | V            |
|             |   | 5851.5            | 53.75            | -65.03        | 118.78                | 40.65               | 33.9                    | 13.71            | 34.51                | 100            | 275               | P                 | V            |
|             |   | 5861.5            | 51.76            | -57.22        | 108.98                | 38.64               | 33.92                   | 13.71            | 34.51                | 100            | 275               | P                 | V            |
|             |   | 5883.75           | 51.95            | -46.75        | 98.7                  | 38.78               | 33.97                   | 13.73            | 34.53                | 100            | 275               | P                 | V            |
|             |   | 5947.25           | 51.06            | -17.14        | 68.2                  | 37.87               | 34                      | 13.77            | 34.58                | 100            | 275               | P                 | V            |
|             |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |
|             |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |
| Remark      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |



**Band 4 5725~5850MHz**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI Ant. 1                          | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. (P/A) | Pol. (H/V) |   |
|--------------------------------------|------|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-----------------|------------|---|
| 802.11n<br>HT40<br>CH 151<br>5755MHz |      | 11510             | 51.54            | -22.46        | 74                    | 32.38               | 39.02                   | 20.13            | 39.99                | -              | -                 | P               | H          |   |
|                                      |      | 11510             | 42.33            | -11.67        | 54                    | 23.17               | 39.02                   | 20.13            | 39.99                | -              | -                 | A               | H          |   |
|                                      |      | 17265             | 53.94            | -14.26        | 68.2                  | 34.9                | 40.6                    | 24.74            | 46.3                 | -              | -                 | P               | H          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | H          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | H          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | H          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | H          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | H          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | H          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | H          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | H          |   |
|                                      |      |                   | 11510            | 51.97         | -22.03                | 74                  | 32.81                   | 39.02            | 20.13                | 39.99          | -                 | -               | P          | V |
|                                      |      |                   | 11510            | 42.31         | -11.69                | 54                  | 23.15                   | 39.02            | 20.13                | 39.99          | -                 | -               | A          | V |
|                                      |      |                   | 17265            | 53.59         | -14.61                | 68.2                | 34.55                   | 40.6             | 24.74                | 46.3           | -                 | -               | P          | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 |            | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 |            | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 |            | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 |            | V |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | V          |   |
|                                      |      |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                 | V          |   |



| WIFI Ant. 1                          | Note  | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|--------------------------------------|---|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| 802.11n<br>HT40<br>CH 159<br>5795MHz |   | 11590             | 51.16            | -22.84        | 74                    | 32                  | 39.02                   | 20.22            | 40.08                | -              | -                 | P                 | H            |   |
|                                      |   | 11590             | 42.34            | -11.66        | 54                    | 23.18               | 39.02                   | 20.22            | 40.08                | -              | -                 | A                 | H            |   |
|                                      |   | 17385             | 54.07            | -14.13        | 68.2                  | 35.16               | 40.5                    | 24.84            | 46.43                | -              | -                 | P                 | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|                                      |   |                   | 11590            | 51.1          | -22.9                 | 74                  | 31.94                   | 39.02            | 20.22                | 40.08          | -                 | -                 | P            | V |
|                                      |   |                   | 11590            | 42.24         | -11.76                | 54                  | 23.08                   | 39.02            | 20.22                | 40.08          | -                 | -                 | A            | V |
|                                      |   |                   | 17385            | 54.05         | -14.15                | 68.2                | 35.14                   | 40.5             | 24.84                | 46.43          | -                 | -                 | P            | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
|                                      |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
| <b>Remark</b>                        | <ol style="list-style-type: none"> <li>No other spurious found.</li> <li>All results are PASS against Peak and Average limit line.</li> <li>The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.</li> </ol> |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |   |



**Band 4 5725~5850MHz**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

| WIFI Ant. 1     | Note  | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |
|-----------------|---|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|
|                 |   | 5633.75           | 51.92            | -16.28        | 68.2                  | 39.44               | 33.4                    | 13.42            | 34.34                | 100            | 327               | P                 | H            |
|                 |   | 5699.75           | 57.89            | -47.13        | 105.02                | 45.06               | 33.7                    | 13.52            | 34.39                | 100            | 327               | P                 | H            |
|                 |   | 5715.25           | 61.57            | -47.9         | 109.47                | 48.64               | 33.79                   | 13.54            | 34.4                 | 100            | 327               | P                 | H            |
|                 |   | 5722.25           | 62.26            | -53.67        | 115.93                | 49.29               | 33.83                   | 13.55            | 34.41                | 100            | 327               | P                 | H            |
|                 | *   | 5775              | 99.69            | -             | -                     | 86.51               | 34                      | 13.63            | 34.45                | 100            | 327               | P                 | H            |
|                 | *   | 5775              | 92.23            | -             | -                     | 79.05               | 34                      | 13.63            | 34.45                | 100            | 327               | A                 | H            |
|                 |   | 5851.25           | 57.1             | -62.25        | 119.35                | 44                  | 33.9                    | 13.71            | 34.51                | 100            | 327               | P                 | H            |
|                 |   | 5855.5            | 54               | -56.66        | 110.66                | 40.89               | 33.91                   | 13.71            | 34.51                | 100            | 327               | P                 | H            |
|                 |   | 5878.25           | 53.33            | -49.46        | 102.79                | 40.18               | 33.96                   | 13.72            | 34.53                | 100            | 327               | P                 | H            |
|                 |   | 5928.75           | 52.25            | -15.95        | 68.2                  | 39.06               | 34                      | 13.76            | 34.57                | 100            | 327               | P                 | H            |
| <b>802.11ac</b> |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| <b>VHT80</b>    |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |
| <b>CH 155</b>   |   | 5631              | 52.35            | -15.85        | 68.2                  | 39.88               | 33.39                   | 13.42            | 34.34                | 100            | 262               | P                 | V            |
| <b>5775MHz</b>  |   | 5684.25           | 57.63            | -35.95        | 93.58                 | 44.87               | 33.64                   | 13.5             | 34.38                | 100            | 262               | P                 | V            |
|                 |   | 5718              | 60.68            | -49.56        | 110.24                | 47.73               | 33.81                   | 13.55            | 34.41                | 100            | 262               | P                 | V            |
|                 |   | 5724.5            | 61.36            | -59.7         | 121.06                | 48.36               | 33.85                   | 13.56            | 34.41                | 100            | 262               | P                 | V            |
|                 | *   | 5775              | 97.81            | -             | -                     | 84.63               | 34                      | 13.63            | 34.45                | 100            | 262               | P                 | V            |
|                 | *   | 5775              | 90.86            | -             | -                     | 77.68               | 34                      | 13.63            | 34.45                | 100            | 262               | A                 | V            |
|                 |   | 5852.25           | 52.89            | -64.18        | 117.07                | 39.79               | 33.9                    | 13.71            | 34.51                | 100            | 262               | P                 | V            |
|                 |   | 5861.5            | 53.47            | -55.51        | 108.98                | 40.35               | 33.92                   | 13.71            | 34.51                | 100            | 262               | P                 | V            |
|                 |   | 5876              | 53.09            | -51.37        | 104.46                | 39.95               | 33.95                   | 13.72            | 34.53                | 100            | 262               | P                 | V            |
|                 |   | 5942.25           | 53.32            | -14.88        | 68.2                  | 40.13               | 34                      | 13.77            | 34.58                | 100            | 262               | P                 | V            |
|                 |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |
|                 |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |
| <b>Remark</b>   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |



**Band 4 5725~5850MHz**  
**WIFI 802.11ac VHT80 (Harmonic @ 3m)**

| WIFI Ant. 1                            | Note  | Frequency ( MHz ) | Level ( dBμV/m ) | Margin ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Path Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. ( P/A ) | Pol. ( H/V ) |   |
|--|---|-------------------|------------------|---------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|---|
| 802.11ac<br>VHT80<br>CH 155<br>5775MHz |   | 11550             | 51.23            | -22.77        | 74                    | 31.99               | 39.1                    | 20.17            | 40.03                | -              | -                 | P                 | H            |   |
|  |   | 11550             | 42.37            | -11.63        | 54                    | 23.13               | 39.1                    | 20.17            | 40.03                | -              | -                 | A                 | H            |   |
|  |   | 17325             | 54.16            | -14.04        | 68.2                  | 35.18               | 40.55                   | 24.79            | 46.36                | -              | -                 | P                 | H            |   |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | H            |   |
|  |   |                   | 11550            | 51.52         | -22.48                | 74                  | 32.28                   | 39.1             | 20.17                | 40.03          | -                 | -                 | P            | V |
|  |   |                   | 11550            | 42.51         | -11.49                | 54                  | 23.27                   | 39.1             | 20.17                | 40.03          | -                 | -                 | A            | V |
|  |   |                   | 17325            | 53.68         | -14.52                | 68.2                | 34.7                    | 40.55            | 24.79                | 46.36          | -                 | -                 | P            | V |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              | V |
|  |   |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   | V            |   |
| <b>Remark</b>                          | <ol style="list-style-type: none"> <li>No other spurious found.</li> <li>All results are PASS against Peak and Average limit line.</li> <li>The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.</li> </ol> |                   |                  |               |                       |                     |                         |                  |                      |                |                   |                   |              |   |





Emission below 1GHz  
5GHz WIFI 802.11a (LF @ 3m)

| WIFI          | Note | Frequency | Level      | Margin | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |   |
|---------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|---|
| Ant.          |      |           |            |        | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |   |
| 1             |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |   |
| 802.11a<br>LF |      | 46.74     | 30.37      | -9.63  | 40         | 45.5     | 16.41    | 1.18   | 32.72  | -      | -       | P       | H       |   |
|               |      | 180.12    | 40.91      | -2.59  | 43.5       | 56.16    | 14.96    | 2.46   | 32.67  | 200    | 205     | Q       | H       |   |
|               |      | 240.06    | 41.58      | -4.42  | 46         | 54.31    | 17.17    | 2.76   | 32.66  | 121    | 17      | Q       | H       |   |
|               |      | 360.2     | 37.05      | -8.95  | 46         | 45.72    | 20.7     | 3.37   | 32.74  | -      | -       | P       | H       |   |
|               |      | 540.1     | 29.98      | -16.02 | 46         | 34.32    | 24.36    | 4.2    | 32.9   | -      | -       | P       | H       |   |
|               |      | 905.5     | 37.72      | -8.28  | 46         | 35.12    | 28.99    | 5.41   | 31.8   | -      | -       | P       | H       |   |
|               |      |           |            |        |            |          |          |        |        |        |         |         |         | H |
|               |      |           |            |        |            |          |          |        |        |        |         |         |         | H |
|               |      |           |            |        |            |          |          |        |        |        |         |         |         | H |
|               |      |           |            |        |            |          |          |        |        |        |         |         |         | H |
|               |      |           |            |        |            |          |          |        |        |        |         |         |         | H |
|               |      |           |            |        |            |          |          |        |        |        |         |         |         | H |
|               |      |           | 46.2       | 27.79  | -12.21     | 40       | 42.62    | 16.72  | 1.17   | 32.72  | -       | -       | P       | V |
|               |      |           | 180.12     | 36.55  | -6.95      | 43.5     | 51.8     | 14.96  | 2.46   | 32.67  | -       | -       | P       | V |
|               |      |           | 240.06     | 35.49  | -10.51     | 46       | 48.22    | 17.17  | 2.76   | 32.66  | -       | -       | P       | V |
|               |      |           | 360.2      | 36.19  | -9.81      | 46       | 44.86    | 20.7   | 3.37   | 32.74  | -       | -       | P       | V |
|               |      |           | 479.9      | 33.53  | -12.47     | 46       | 38.9     | 23.54  | 3.93   | 32.84  | -       | -       | P       | V |
|               |      |           | 983.9      | 42.12  | -11.88     | 54       | 36.78    | 30.69  | 5.69   | 31.04  | -       | -       | P       | V |
|               |      |           |            |        |            |          |          |        |        |        |         |         | V       |   |
|               |      |           |            |        |            |          |          |        |        |        |         |         | V       |   |
|               |      |           |            |        |            |          |          |        |        |        |         |         | V       |   |
|               |      |           |            |        |            |          |          |        |        |        |         |         | V       |   |
|               |      |           |            |        |            |          |          |        |        |        |         |         | V       |   |
|               |      |           |            |        |            |          |          |        |        |        |         |         | V       |   |

**Remark**

- No other spurious found.
- All results are PASS against limit line.
- The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.





**Note symbol**

|     |  |
|-----|--|
| *   | <b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency. |
| !   | Test result is <b>Margin</b> line.   |
| P/A | <b>Peak</b> or <b>Average</b>  |
| H/V | <b>Horizontal</b> or <b>Vertical</b>   |



A calculation example for radiated spurious emission is shown as below:

| WIFI    | Note | Frequency | Level      | Margin | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|---------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.    |      |           |            |        | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1       |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a |      | 11213     | 48.14      | -25.86 | 74         | 59.06    | 39.72    | 17.65  | 68.29  | -      | -       | P       | H       |
| CH 149  |      | 11213     | 37.67      | -16.33 | 54         | 48.59    | 39.72    | 17.65  | 68.29  | -      | -       | A       | H       |
| 5745MHz |      |           |            |        |            |          |          |        |        |        |         |         |         |

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Margin(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 11213MHz:**

1. Level(dBμV/m)  
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 39.72(dB/m) + 17.65(dB) + 59.06(dBμV) – 68.29 (dB)  
= 48.14 (dBμV/m)
2. Margin(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 48.14(dBμV/m) – 74(dBμV/m)  
= -25.86(dB)

**For Average Limit @ 11213MHz:**

1. Level(dBμV/m)  
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 39.72(dB/m) + 17.65(dB) + 48.59(dBμV) – 68.29 (dB)  
= 37.67 (dBμV/m)
2. Margin(dB) = Level(dBμV/m) – Limit Line(dBμV/m)  
= 37.67(dBμV/m) – 54(dBμV/m)  
= -16.33(dB)

**Both peak and average measured complies with the limit line, so test result is “PASS”.**



## Appendix D. Radiated Spurious Emission Plots

|                 |                                     |                     |         |
|-----------------|-------------------------------------|---------------------|---------|
| Test Engineer : | Bank Lin, Ken Kuo and Lucifer Jiang | Temperature :       | 20~23°C |
|                 |                                     | Relative Humidity : | 42~55%  |



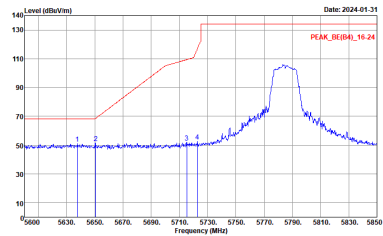
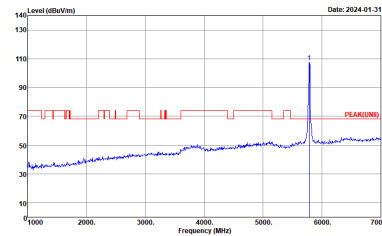
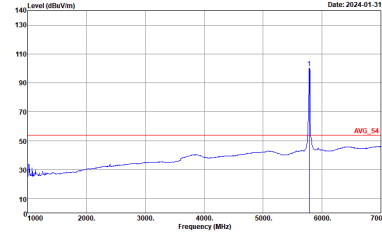
**Band 4 - 5725~5850MHz**  
**WIFI 802.11a (Band Edge @ 3m)**

| WIFI        | Band 4 5725~5850MHz Band Edge @ 3m   |  |
|-------------|--|--|
| ANT         | 802.11a CH149 5745MHz  |  |
| <b>1</b>    | <b>Horizontal</b>  | <b>Fundamental</b>   |
| <b>Peak</b> | <p>Site : 03CH22-HY<br/>           Condition : PEAK_REF(84)_16-24 3m LE2C04A18EN_230712 HORIZONTAL<br/>           : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> | <p>Site : 03CH22-HY<br/>           Condition : PEAK(LINE) 3m LE2C04A18EN_230712 HORIZONTAL<br/>           : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |
| <b>Avg.</b> | <b>Left blank</b>  | <p>Site : 03CH22-HY<br/>           Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL<br/>           : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>        |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m   |   |
|------|--|---|
| ANT  | 802.11a CH149 5745MHz  |   |
| 1    | Vertical   | Fundamental   |
| Peak | <p>Site : 03CH22-HY<br/>Condition : PEAK_BE(B4)_16-24 3m LE2004A18ENL_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK(LINE) 3m LE2004A18ENL_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank   | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2004A18ENL_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>        |

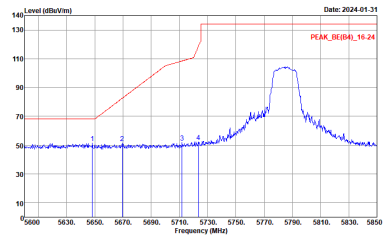
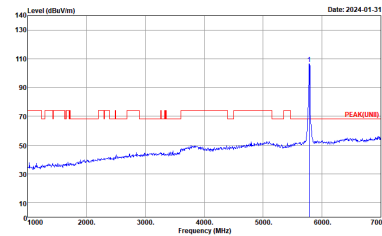
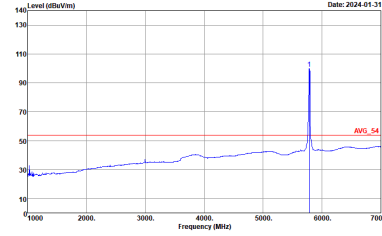


| WIFI | Band 4 5725~5850MHz Band Edge @ 3m   |   |
|------|--|---|
| ANT  | 802.11a CH157 5785MHz  |   |
| 1    | Horizontal   | Fundamental   |
| Peak |  <p>Site : 03CH22-HY<br/>Condition : PEAK_BE[94]_16-24 3m LE2004A18ENL_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK[LINE3] 3m LE2004A18ENL_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank   |  <p>Site : 03CH22-HY<br/>Condition : AV6_54 3m LE2004A18ENL_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>       |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |             |
|------|---|-------------|
| ANT  | 802.11a CH157 5785MHz   |             |
| 1    | Horizontal  | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_94_16-24 3m LE2C04A18EN_230712 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p> | Left blank  |



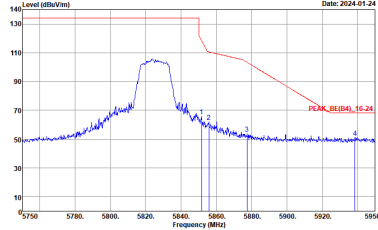
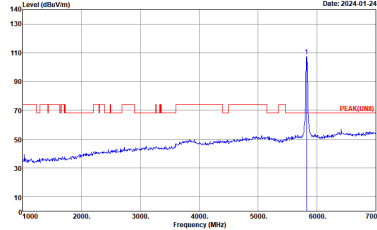
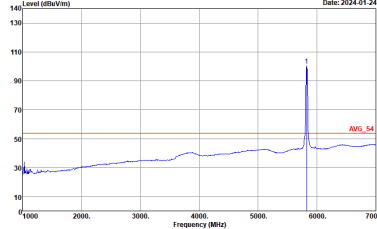
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m   |   |
|------|--|---|
| ANT  | 802.11a CH157 5785MHz  |   |
| 1    | Vertical   | Fundamental   |
| Peak |  <p>Site : 03CH22-HY<br/>Condition : PEAK_BE[94]_16-24 3m LE2004A18ENL_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK[LINE3] 3m LE2004A18ENL_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank   |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2004A18ENL_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>       |



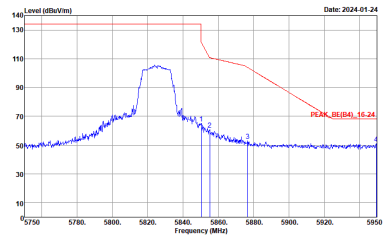
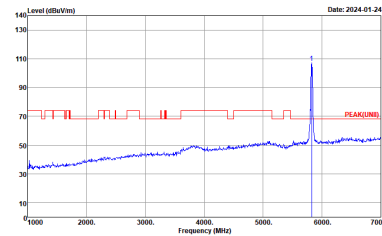
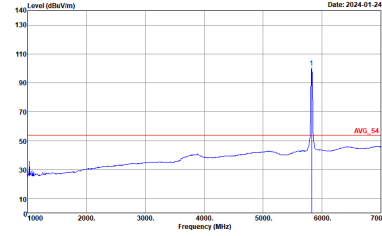


| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |             |
|------|---|-------------|
| ANT  | 802.11a CH157 5785MHz   |             |
| 1    | Vertical  | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_94_16-24 3m LE2C04A18EN_230712 VERTICAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p> | Left blank  |



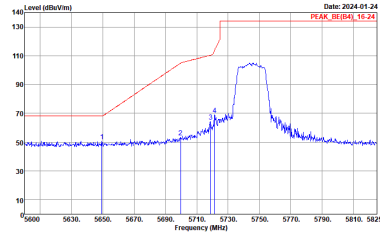
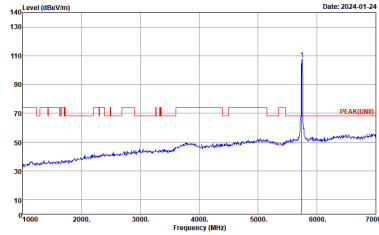
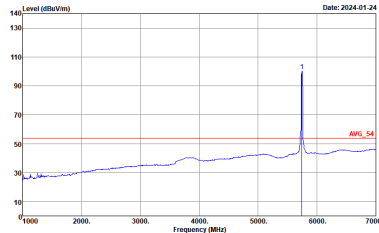
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m   |   |
|------|--|---|
| ANT  | 802.11a CH165 5825MHz  |   |
| 1    | Horizontal   | Fundamental   |
| Peak |  <p>Site : 03CH22-HY<br/>Condition : PEAK_8E[94]_16-24 3m LE2C04A18ENL_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK[LINE3] 3m LE2C04A18ENL_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank   |  <p>Site : 03CH22-HY<br/>Condition : AV6_54 3m LE2C04A18ENL_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>       |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |   |
|------|---|---|
| ANT  | 802.11a CH165 5825MHz   |   |
| 1    | Vertical  | Fundamental   |
| Peak |  <p>Site : 03CH22-HY<br/>Condition : PEAK_BU(B4)_16-24 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK(LINE) 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>      |



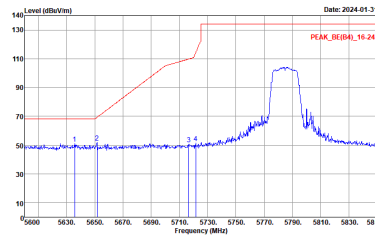
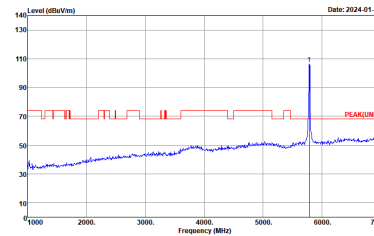
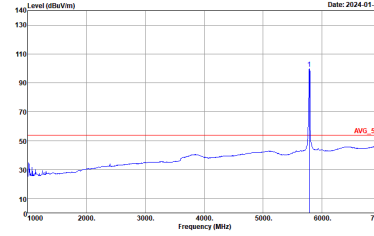
**Band 4 5725~5850MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |   |
|------|---|---|
| ANT  | 802.11n HT20 CH149 5745MHz  |   |
| 1    | Horizontal  | Fundamental   |
| Peak |  <p>Site : 03CH22-HY<br/>           Condition : PEAK_BE(84)_16-24 3m LE2C04A18EN_230712 HORIZONTAL<br/>           : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>                       |  <p>Site : 03CH22-HY<br/>           Condition : PEAK(UNII) 3m LE2C04A18EN_230712 HORIZONTAL<br/>           : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | <p align="center">Left blank</p>  <p>Site : 03CH22-HY<br/>           Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL<br/>           : RBW:1000.000KHz VBW:0.820KHz SWT:Auto</p> |   |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |   |
|------|---|---|
| ANT  | 802.11n HT20 CH149 5745MHz  |   |
| 1    | Vertical  | Fundamental   |
| Peak | <p>Site : 03CH22-HY<br/>Condition : PEAK_BE[94]_16-24 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK[LINE1] 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  | <p>Site : 03CH22-HY<br/>Condition : AV6_54 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:0.620KHz SWT:Auto</p>         |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |  |
|------|---|--|
| ANT  | 802.11n HT20 CH157 5785MHz  |  |
| 1    | Horizontal  | Fundamental  |
| Peak |  <p>Site : 03CH22-HY<br/>Condition : PEAK_BE[94]_16-24 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK[LINE3] 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  |  <p>Site : 03CH22-HY<br/>Condition : AV6_54 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:0.620KHz SWT:Auto</p>       |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |             |
|------|---|-------------|
| ANT  | 802.11n HT20 CH157 5785MHz  |             |
| 1    | Horizontal  | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_94_16-24 3m LE2C04A18EN_230712 HORIZONTAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p> | Left blank  |



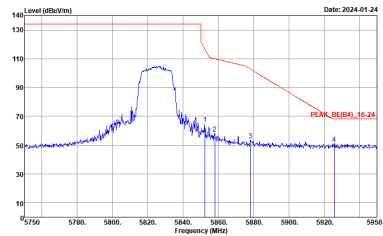
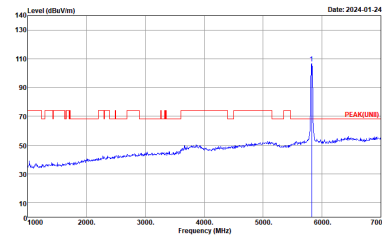
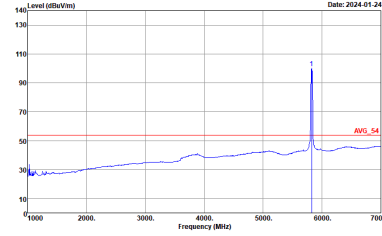
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |  |
|------|---|--|
| ANT  | 802.11n HT20 CH157 5785MHz  |  |
| 1    | Vertical  | Fundamental  |
| Peak | <p>Site : 03CH22-HY<br/>Condition : PEAK_BE(B4)_16-24 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK(LINE) 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:0.620KHz SWT:Auto</p>        |



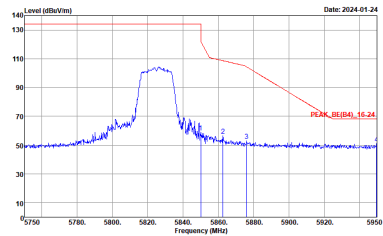
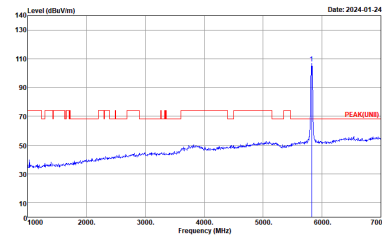
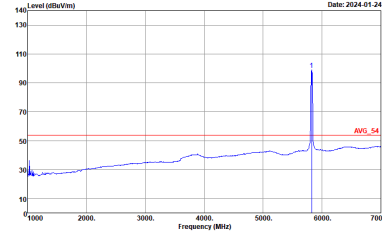


| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |             |
|------|---|-------------|
| ANT  | 802.11n HT20 CH157 5785MHz  |             |
| 1    | Vertical  | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_BC(B4)_16-24 3m LE2C04A18EN_230712 VERTICAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> | Left blank  |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |   |
|------|---|---|
| ANT  | 802.11n HT20 CH165 5825MHz  |   |
| 1    | Horizontal  | Fundamental   |
| Peak |  <p>Site : 03CH22-HY<br/>Condition : PEAK_BI(B4)_16-24 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK(LINE) 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:0.620KHz SWT:Auto</p>      |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |  |
|------|---|--|
| ANT  | 802.11n HT20 CH165 5825MHz  |  |
| 1    | Vertical  | Fundamental  |
| Peak |  <p>Site : 03CH22-HY<br/>Condition : PEAK_8E[94]_16-24 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK[LINE3] 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:0.620KHz SWT:Auto</p>       |



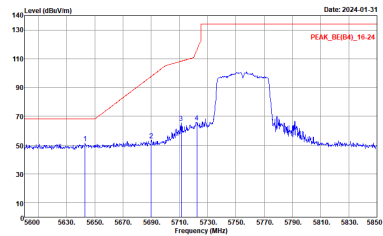
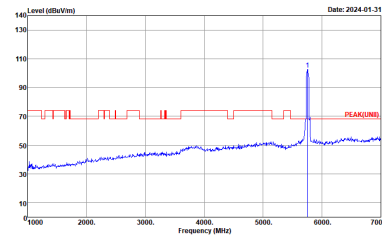
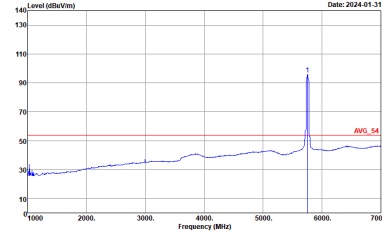
**Band 4 5725~5850MHz  
WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m |             |
|------|------------------------------------|-------------|
| ANT  | 802.11n HT40 CH151 5755MHz         |             |
| 1    | Horizontal                         | Fundamental |
| Peak |                                    |             |
| Avg. | Left blank                         |             |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |             |
|------|---|-------------|
| ANT  | 802.11n HT40 CH151 5755MHz  |             |
| 1    | Horizontal  | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_94_16-24 3m LE2C04A18EN_230712 HORIZONTAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p> | Left blank  |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |  |
|------|---|--|
| ANT  | 802.11n HT40 CH151 5755MHz  |  |
| 1    | Vertical  | Fundamental  |
| Peak |  <p>Site : 03CH22-HY<br/>Condition : PEAK_BE[94]_16-24 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK[LINE3] 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  |  <p>Site : 03CH22-HY<br/>Condition : AV6_54 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:1600KHz SWT:Auto</p>        |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |             |
|------|---|-------------|
| ANT  | 802.11n HT40 CH151 5755MHz  |             |
| 1    | Vertical  | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_9E(94)_16-24 3m LE2C04A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p> | Left blank  |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |   |
|------|---|---|
| ANT  | 802.11n HT40 CH159 5795MHz  |   |
| 1    | Horizontal  | Fundamental   |
| Peak | <p>Site : 03CH22-HY<br/>Condition : PEAK_BE[94]_16-24 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK[LINE3] 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  | <p>Site : 03CH22-HY<br/>Condition : AV6_54 3m LE2004A18EN_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1600KHz SWT:Auto</p>          |





| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |             |
|------|---|-------------|
| ANT  | 802.11n HT40 CH159 5795MHz  |             |
| 1    | Horizontal  | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_94_16-24 3m LE2C04A18EN_230712 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> | Left blank  |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |  |
|------|---|--|
| ANT  | 802.11n HT40 CH159 5795MHz  |  |
| 1    | Vertical  | Fundamental  |
| Peak | <p>Site : 03CH22-HY<br/>Condition : PEAK_BE(B4)_16-24 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK(LINE) 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:1600KHz SWT:Auto</p>         |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m   |             |
|------|--|-------------|
| ANT  | 802.11n HT40 CH159 5795MHz   |             |
| 1    | Vertical   | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_BC(B4)_16-24 3m LE2C04A18ENL_230712 VERTICAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p> | Left blank  |



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

Table with 2 columns (WIFI, ANT) and 2 rows (Peak, Avg.). The 'Peak' row shows 'Horizontal' and 'Fundamental' plots. The 'Avg.' row shows 'Left blank' and a plot with 'AVG\_54'.



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m   |             |
|------|--|-------------|
| ANT  | 802.11ac VHT80 CH155 5775MHz   |             |
| 1    | Horizontal   | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_8E(84)_16-24 3m LE2C04A18ENL_230712 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m  |  |
|------|---|--|
| ANT  | 802.11ac VHT80 CH155 5775MHz  |  |
| 1    | Vertical  | Fundamental  |
| Peak | <p>Site : 03CH22-HY<br/>Condition : PEAK_BE(B4)_16-24 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK(LINE) 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | Left blank  | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2004A18EN_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:1800KHz SWT:Auto</p>         |



| WIFI | Band 4 5725~5850MHz Band Edge @ 3m   |             |
|------|--|-------------|
| ANT  | 802.11ac VHT80 CH155 5775MHz   |             |
| 1    | Vertical   | Fundamental |
| Peak | <p>Site : 09CH22-HV<br/>Condition : PEAK_BC(B4)_16-24 3m LE2C04A18ENL_230712 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |



**Band 4 - 5725~5850MHz**  
**WIFI 802.11a (Harmonic @ 3m)**

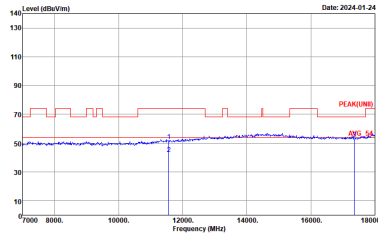
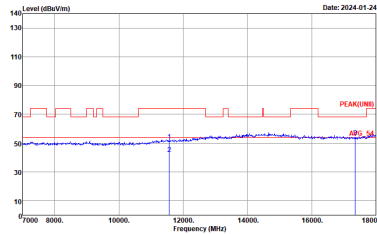
|                            |   |   |
|----------------------------|---|---|
| <b>WIFI</b>                | <b>Band 4 5725~5850MHz Harmonic @ 3m</b>  |   |
| <b>ANT</b>                 | <b>802.11a CH149 5745MHz</b>  |   |
| <b>1</b>                   | <b>Horizontal</b>   | <b>Vertical</b>   |
| <b>Peak</b><br><b>Avg.</b> | <p>Site : 03CH22-HY<br/>Condition : PEAK[UNII] 3m LE2C04A18EN_230712 HORIZONTAL</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK[UNII] 3m LE2C04A18EN_230712 VERTICAL</p> |





|                       |   |   |
|-----------------------|---|---|
| WIFI                  | Band 4 5725~5850MHz Harmonic @ 3m   |   |
| ANT                   | 802.11a CH149 5745MHz   |   |
| 1                     | Horizontal  | Vertical  |
| 10.6G<br>~18G<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p> | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p> |

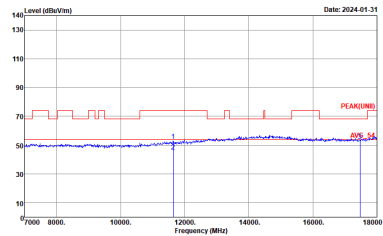
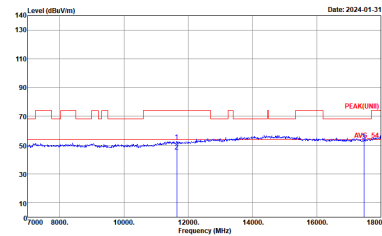


|              |   |  |
|--------------|---|--|
| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m   |  |
| ANT          | 802.11a CH157 5785MHz   |  |
| 1            | Horizontal  | Vertical   |
| Peak<br>Avg. |  <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 HORIZONTAL</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 VERTICAL</p> |

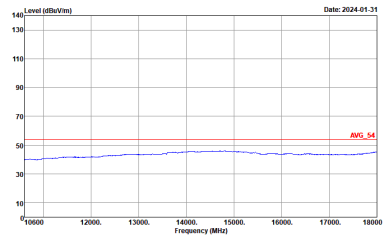
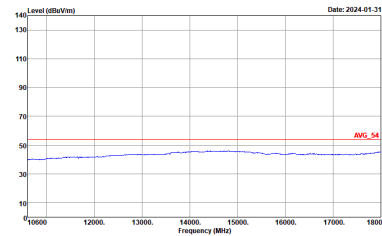


|                       |   |   |
|-----------------------|---|---|
| WIFI                  | Band 4 5725~5850MHz Harmonic @ 3m   |   |
| ANT                   | 802.11a CH157 5785MHz   |   |
| 1                     | Horizontal  | Vertical  |
| 10.6G<br>~18G<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL<br/>:</p> | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL<br/>:</p> |



|              |   |  |
|--------------|---|--|
| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m   |  |
| ANT          | 802.11a CH165 5825MHz   |  |
| 1            | Horizontal  | Vertical   |
| Peak<br>Avg. |  <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 HORIZONTAL<br/>:</p> |  <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 VERTICAL<br/>:</p> |



|                                |   |  |
|--------------------------------|---|--|
| WIFI                           | Band 4 5725~5850MHz Harmonic @ 3m   |  |
| ANT                            | 802.11a CH165 5825MHz   |  |
| 1                              | Horizontal  | Vertical   |
| <p>10.6G<br/>~18G<br/>Avg.</p> |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p> |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p> |



**Band 4 5725~5850MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI                       | Band 4 5725~5850MHz Harmonic @ 3m  |  |
|----------------------------|--|--|
| ANT                        | 802.11n HT20 CH149 5745MHz   |  |
| 1                          | Horizontal   | Vertical   |
| <b>Peak</b><br><b>Avg.</b> | <p>Site : 03CH22-HY<br/>           Condition : PEAK(UNII) 3m LE2C04A18EN_230712 HORIZONTAL</p> | <p>Site : 03CH22-HY<br/>           Condition : PEAK(UNII) 3m LE2C04A18EN_230712 VERTICAL</p> |



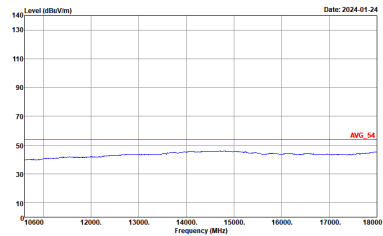
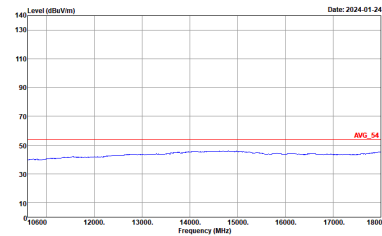
|                       |   |   |
|-----------------------|---|---|
| WIFI                  | Band 4 5725~5850MHz Harmonic @ 3m   |   |
| ANT                   | 802.11n HT20 CH149 5745MHz  |   |
| 1                     | Horizontal  | Vertical  |
| 10.6G<br>~18G<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p> | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p> |



| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m   |   |
|--------------|---|---|
| ANT          | 802.11n HT20 CH157 5785MHz  |   |
| 1            | Horizontal  | Vertical  |
| Peak<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 HORIZONTAL</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 VERTICAL</p> |





|                                |   |  |
|--------------------------------|---|--|
| WIFI                           | Band 4 5725~5850MHz Harmonic @ 3m   |  |
| ANT                            | 802.11n HT20 CH157 5785MHz  |  |
| 1                              | Horizontal  | Vertical   |
| <p>10.6G<br/>~18G<br/>Avg.</p> |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p> |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p> |



| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m   |   |
|--------------|---|---|
| ANT          | 802.11n HT20 CH165 5825MHz  |   |
| 1            | Horizontal  | Vertical  |
| Peak<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 HORIZONTAL</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 VERTICAL</p> |



|                       |   |   |
|-----------------------|---|---|
| WIFI                  | Band 4 5725~5850MHz Harmonic @ 3m   |   |
| ANT                   | 802.11n HT20 CH165 5825MHz  |   |
| 1                     | Horizontal  | Vertical  |
| 10.6G<br>~18G<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p> | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p> |



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

Table with 2 columns: Horizontal and Vertical. It contains two spectral plots showing Level (dBuV/m) vs Frequency (MHz) for Peak and Avg. measurements. The horizontal plot shows a peak level of approximately 75 dBuV/m and an average level of 54 dBuV/m. The vertical plot shows a peak level of approximately 75 dBuV/m and an average level of 54 dBuV/m.

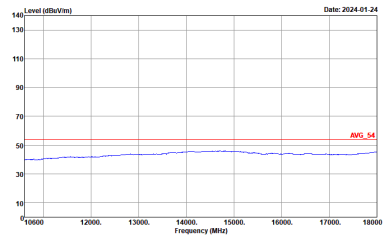
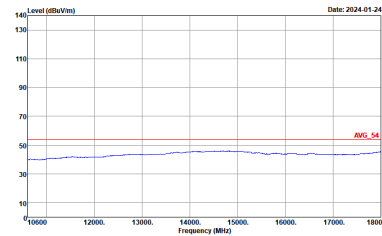


|                       |   |   |
|-----------------------|---|---|
| WIFI                  | Band 4 5725~5850MHz Harmonic @ 3m   |   |
| ANT                   | 802.11n HT40 CH151 5755MHz  |   |
| 1                     | Horizontal  | Vertical  |
| 10.6G<br>~18G<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL<br/>:</p> | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL<br/>:</p> |



| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m   |   |
|--------------|---|---|
| ANT          | 802.11n HT40 CH159 5795MHz  |   |
| 1            | Horizontal  | Vertical  |
| Peak<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 HORIZONTAL<br/>:</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK(UNIT) 3m LE2004A18EN_230712 VERTICAL<br/>:</p> |



|                                |   |  |
|--------------------------------|---|--|
| WIFI                           | Band 4 5725~5850MHz Harmonic @ 3m   |  |
| ANT                            | 802.11n HT40 CH159 5795MHz  |  |
| 1                              | Horizontal  | Vertical   |
| <p>10.6G<br/>~18G<br/>Avg.</p> |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL</p> |  <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL</p> |



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

Table with 3 columns: WIFI, ANT, and measurement results for Horizontal and Vertical orientations. Includes sub-headers for Peak and Avg. and two line graphs showing Level (dBuV/m) vs Frequency (MHz).





|                       |   |   |
|-----------------------|---|---|
| WIFI                  | Band 4 5725~5850MHz Harmonic @ 3m   |   |
| ANT                   | 802.11ac VHT80 CH155 5775MHz  |   |
| 1                     | Horizontal  | Vertical  |
| 10.6G<br>~18G<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL<br/>:</p> | <p>Site : 03CH22-HY<br/>Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL<br/>:</p> |



Emission above 18GHz  
5GHz WIFI 802.11a (SHF @ 1m)

| WIFI         | 5GHz WIFI  |  |
|--------------|--|--|
| ANT          | 802.11a SHF  |  |
| 1            | Horizontal   | Vertical   |
| Peak<br>Avg. | <p>Site : 03CH22-HY<br/>Condition : PEAK[UNII] 1m SHF_1224_230710 HORIZONTAL</p> | <p>Site : 03CH22-HY<br/>Condition : PEAK[UNII] 1m SHF_1224_230710 VERTICAL</p> |



Emission below 1GHz  
5GHz WIFI 802.11a (LF @ 3m)

| WIFI         | 5GHz WIFI  |  |
|--------------|--|--|
| ANT          | 802.11a LF   |  |
| 1            | Horizontal   | Vertical   |
| QP /<br>Peak | <p>Site : 03CH22-1HY<br/>Condition : QP 3m BIL0663304_231015_30 HORIZONTAL</p> | <p>Site : 03CH22-1HY<br/>Condition : QP 3m BIL0663304_231015_30 VERTICAL</p> |



## Appendix E. Duty Cycle Plots

| Antenna | Band                | Duty Cycle(%) | T(us) | 1/T(kHz) | VBW Setting |
|---------|---------------------|---------------|-------|----------|-------------|
| 1       | 802.11a             | 93.44         | 1425  | 0.70     | 750Hz       |
| 1       | 5GHz 802.11n HT20   | 92.71         | 1335  | 0.75     | 820Hz       |
| 1       | 5GHz 802.11n HT40   | 86.69         | 664.1 | 1.51     | 1.6kHz      |
| 1       | 5GHz 802.11ac VHT80 | 86.08         | 612   | 1.63     | 1.8kHz      |

