

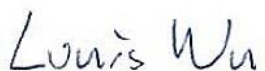


# FCC RADIO TEST REPORT

FCC ID : P4Q-N672B  
Equipment : LTE Module  
Brand Name : MiTAC, Mio, NAVMAN, MAGELLAN  
Model Name : SC600T-NA  
Applicant : MiTAC Digital Technology Corporation  
4F., NO. 1, R&D ROAD 2, HSINCHU SCIENCE  
PARK, HSINCHU 30076, TAIWAN, R.O.C.  
Manufacturer : MITAC Computer (Kunshan) Co., Ltd.  
No. 269, 2nd Avenue, District A, Comprehensive  
Free Trade Zone, 300 Kunshan, China  
Standard : FCC Part 15 Subpart E §15.407

The product was received on Dec. 09, 2020 and testing was started from Dec. 30, 2020 and completed on Feb. 11, 2021. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications 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 partial report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Louis Wu

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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## History of this test report

| Report No. | Version | Description             | Issued Date   |
|------------|---------|-------------------------|---------------|
| FR0D1806E  | 01      | Initial issue of report | Feb. 28, 2021 |
|            |         |                         |               |
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## Summary of Test Result

| Report Clause                                                                                                                                     | Ref Std. Clause     | Test Items                             | Result (PASS/FAIL) | Remark                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------|--------------------|------------------------------------------|
| -                                                                                                                                                 | 15.403(i)           | 6dB & 26dB Bandwidth                   | -                  | See Note                                 |
| -                                                                                                                                                 | 2.1049              | 99% Occupied Bandwidth                 | -                  | See Note                                 |
| 3.1                                                                                                                                               | 15.407(a)           | Maximum Conducted Output Power         | Pass               | -                                        |
| -                                                                                                                                                 | 15.407(a)           | Power Spectral Density                 | -                  | See Note                                 |
| 3.2                                                                                                                                               | 15.407(b)           | Unwanted Emissions                     | Pass               | Under limit<br>3.09 dB at<br>203.630 MHz |
| 3.3                                                                                                                                               | 15.207              | AC Conducted Emission                  | Pass               | Under limit<br>13.63 dB at<br>0.501 MHz  |
| -                                                                                                                                                 | 15.407(c)           | Automatically Discontinue Transmission | -                  | See Note                                 |
| 3.4                                                                                                                                               | 15.203<br>15.407(a) | Antenna Requirement                    | Pass               | -                                        |
| <b>Note:</b> The module (Model: SC600T-NA) makes no difference after verifying output power, this report reuses test data from the module report. |                     |                                        |                    |                                          |

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

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

**Reviewed by: Wii Chang**

**Report Producer: Dara Chiu**



# 1 General Description-

## 1.1 Product Feature of Equipment Under Test

WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, and GNSS.

| Product Specification subjective to this standard |                                                                                                      |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Sample 1                                          | EUT with Host 1                                                                                      |
| Sample 2                                          | EUT with Host 2                                                                                      |
| Antenna Type                                      | WWAN: PIFA Antenna<br>WLAN: PIFA Antenna<br>Bluetooth: PIFA Antenna<br>GPS / Glonass : Patch Antenna |

| Antenna information |                 |          |
|---------------------|-----------------|----------|
| 5725 MHz ~ 5850 MHz | Peak Gain (dBi) | 1.70 dBi |

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

The product was installed into Tablet (Brand Name: MiTAC, Mio, NAVMAN, MAGELLAN, Model Name: N672B) during test, and the host information was recorded in the following table.

| Host Information |                 |
|------------------|-----------------|
| Host 1           | Host with SKU A |
| Host 2           | Host with SKU B |

| Sample Information |                                           |                                           |
|--------------------|-------------------------------------------|-------------------------------------------|
| Functions          | SKU A                                     | SKU B                                     |
| Screen             | 5" 720x1280 (HD), IPS, 350nits (w/ touch) | 5" 720x1280 (HD), IPS, 350nits (w/ touch) |
| CPU                | SD625 octa core 2.0GHz                    | SD625 octa core 2.0GHz                    |
| Battery            | 4110mAh (hard pack)                       | 4110mAh (hard pack)                       |
| RAM                | 3GB                                       | 3GB                                       |
| Storage            | 32GB                                      | 32GB                                      |
| External storage   | Support                                   | Support                                   |
| WWAN + WLAN Module | Support (SC600T-NA)                       | Support (SC600T-NA)                       |
| NFC/RFID(HF)       | Support                                   | Support                                   |
| GPS                | Support                                   | Support                                   |
| Barcode            | Support(N6603)                            | Support(N3601)                            |

| Functions          | SKU C                                     | SKU D                                     |
|--------------------|-------------------------------------------|-------------------------------------------|
| Screen             | 5" 720x1280 (HD), IPS, 350nits (w/ touch) | 5" 720x1280 (HD), IPS, 350nits (w/ touch) |
| CPU                | SD625 octa core 2.0GHz                    | SD625 octa core 2.0GHz                    |
| Battery            | 4110mAh (hard pack)                       | 4110mAh (hard pack)                       |
| RAM                | 2GB                                       | 2GB                                       |
| Storage            | 16GB                                      | 16GB                                      |
| External storage   | Support                                   | Support                                   |
| WWAN + WLAN Module | Support (SC600T-NA)                       | Support (SC600T-NA)                       |
| NFC/RFID(HF)       | Support                                   | Support                                   |
| GPS                | Support                                   | Support                                   |
| Barcode            | Support(N6603)                            | Support(N3601)                            |

## 1.2 Modification of EUT

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

## 1.3 Testing Location

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory                                                   |
| Test Site Location | No.52, Huaya 1st Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |
| Test Site No.      | <b>Sporton Site No.</b><br>TH05-HY, CO05-HY                                                                           |

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

|                    |                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory                                                                       |
| Test Site Location | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-0868<br>FAX: +886-3-327-0855 |
| Test Site No.      | <b>Sporton Site No.</b><br>03CH15-HY                                                                                                      |

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

FCC designation No.: TW1190 and TW0007

## 1.4 Applicable Standards

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

## 2 Test Configuration of Equipment Under Test

- 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, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded 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 <sup>#</sup> | 5775        | 165     | 5825        |

**Note:**

1. The above Frequency and Channel in "\*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "<sup>#</sup>" were 802.11ac VHT80.

## 2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

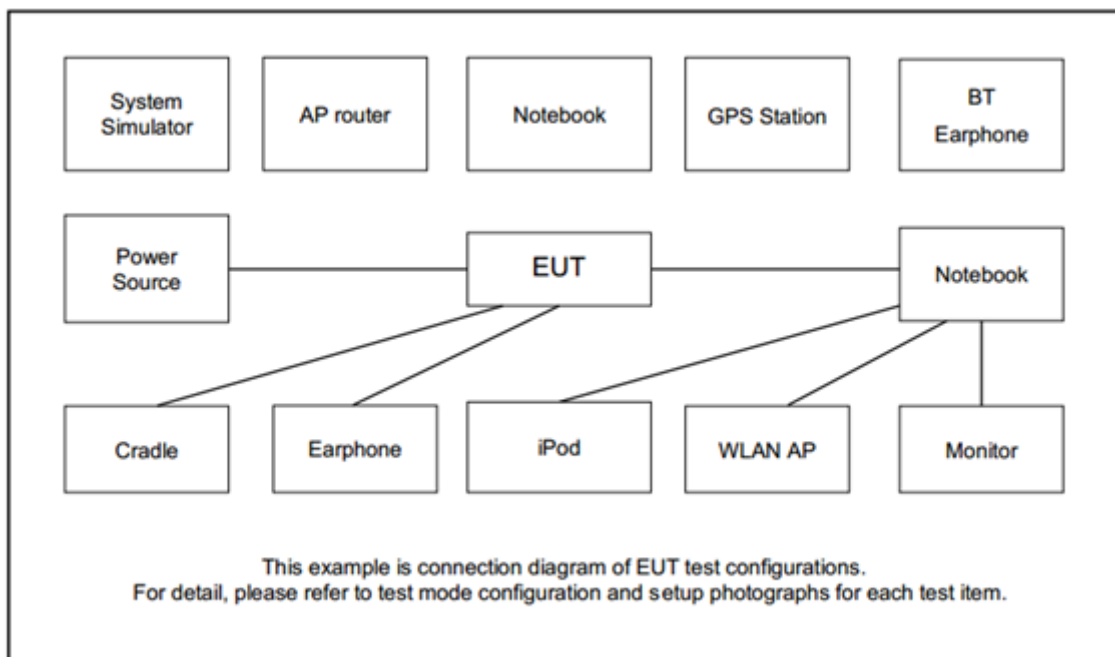
| Modulation     | Data Rate |
|----------------|-----------|
| 802.11a        | 6 Mbps    |
| 802.11n HT20   | MCS0      |
| 802.11n HT40   | MCS0      |
| 802.11ac VHT20 | MCS0      |
| 802.11ac VHT40 | MCS0      |
| 802.11ac VHT80 | MCS0      |

| Test Cases                   |                                                                                                                             |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>AC Conducted Emission</b> | Mode 1: WLAN (5GHz) Link + Bluetooth Link + H-Pattern + Earphone + Battery + USB Cable (Charging with Adapter) for Sample 2 |

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

**Remark:** For radiation spurious emission, the final modulation and the worst data rate was reference 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.   | Bluetooth Earphone | Sony Ericsson | MW600         | PY7DDA-2029  | N/A               | N/A                                                        |
| 2.   | WLAN AP            | ASUS          | RT-AC66U      | MSQ-RTAC66U  | Shielded, 1.6 m   | Unshielded, 1.8 m                                          |
| 3.   | iPod Earphone      | Apple         | N/A           | Verification | Unshielded, 1.0 m | N/A                                                        |
| 4.   | Notebook           | DELL          | Latitude 3400 | FCC DoC      | N/A               | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 5.   | SD Card            | SanDisk       | MicroSD HC    | FCC DoC      | N/A               | N/A                                                        |

## 2.5 EUT Operation Test Setup

The RF test items, utility "QRCT Version 3.0.303.0" 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.

### 3 Test Result

#### 3.1 Maximum Conducted Output Power Measurement

##### 3.1.1 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.

##### 3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

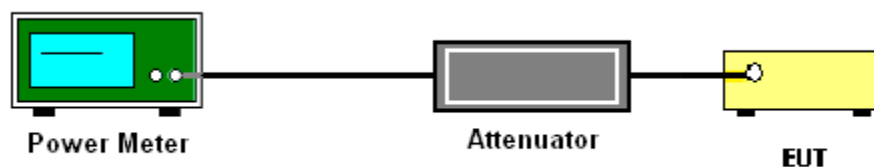
##### 3.1.3 Test Procedures

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.

##### 3.1.4 Test Setup



##### 3.1.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

## 3.2 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

### <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 fallen in restricted bands shall comply with the general field strength limits as below table,

| Frequency<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(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.

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

| 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.

### 3.2.1 Measuring Instruments

See list of measuring equipment of this test report.

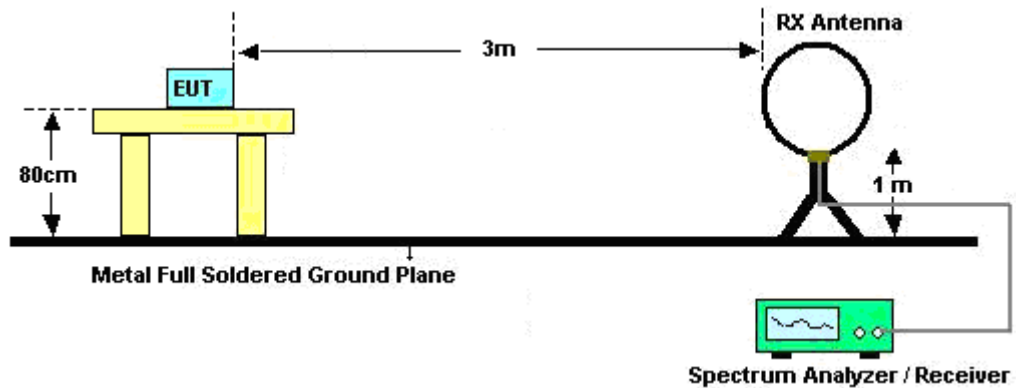


### 3.2.2 Test Procedures

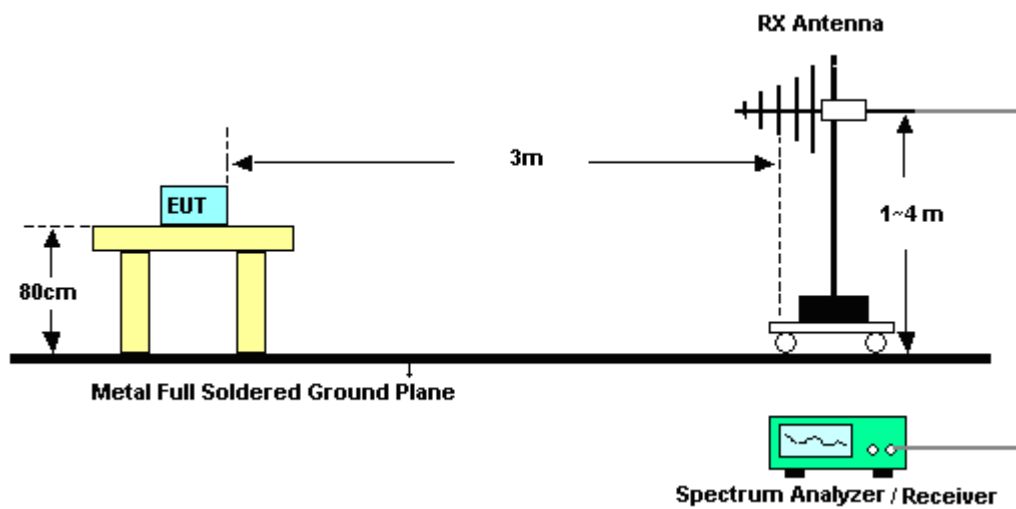
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.  
Section G) Unwanted emissions measurement.  
(1) Procedure for Unwanted Emissions Measurements Below 1000MHz
  - RBW = 120 kHz
  - VBW = 300 kHz
  - Detector = Peak
  - Trace mode = max hold  
(2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
  - RBW = 1 MHz
  - VBW  $\geq$  3 MHz
  - Detector = Peak
  - Sweep time = auto
  - Trace mode = max hold  
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
  - RBW = 1 MHz
  - VBW = 10 Hz, when duty cycle is no less than 98 percent.
  - VBW  $\geq$  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 was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 3.2.3 Test Setup

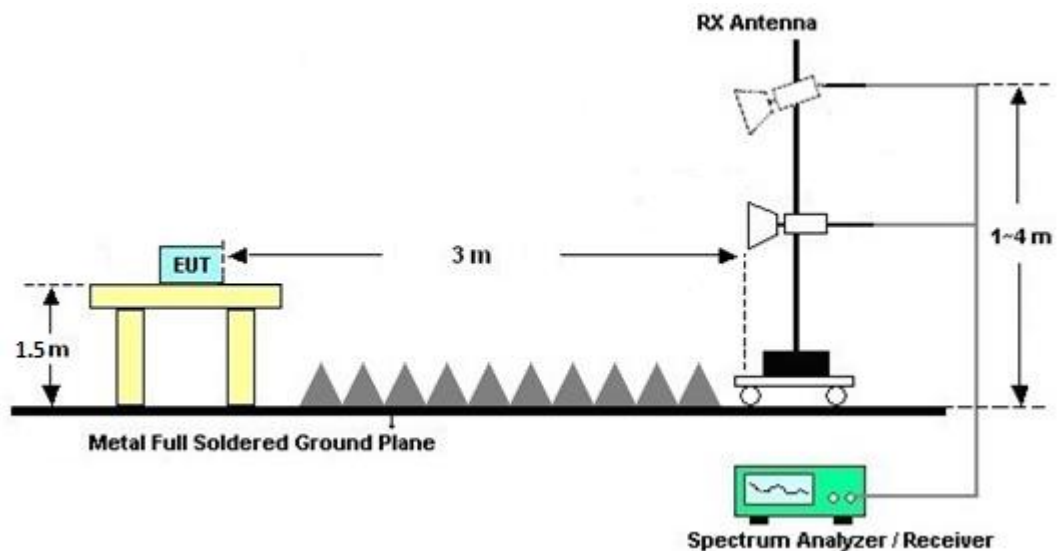
For radiated emissions below 30MHz



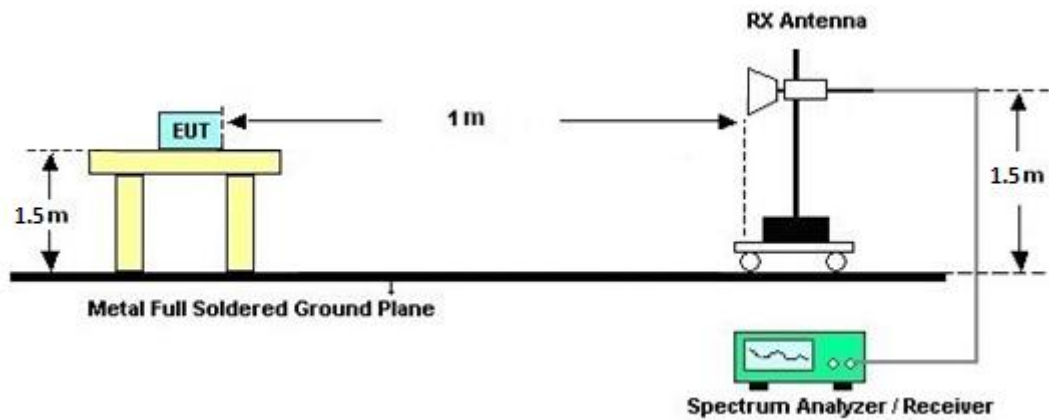
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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

There is a comparison data 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.

### 3.2.5 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

### 3.2.6 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

### 3.3 AC Conducted Emission Measurement

#### 3.3.1 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 (dBμV) |           |
|-----------------------------|------------------------|-----------|
|                             | 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.

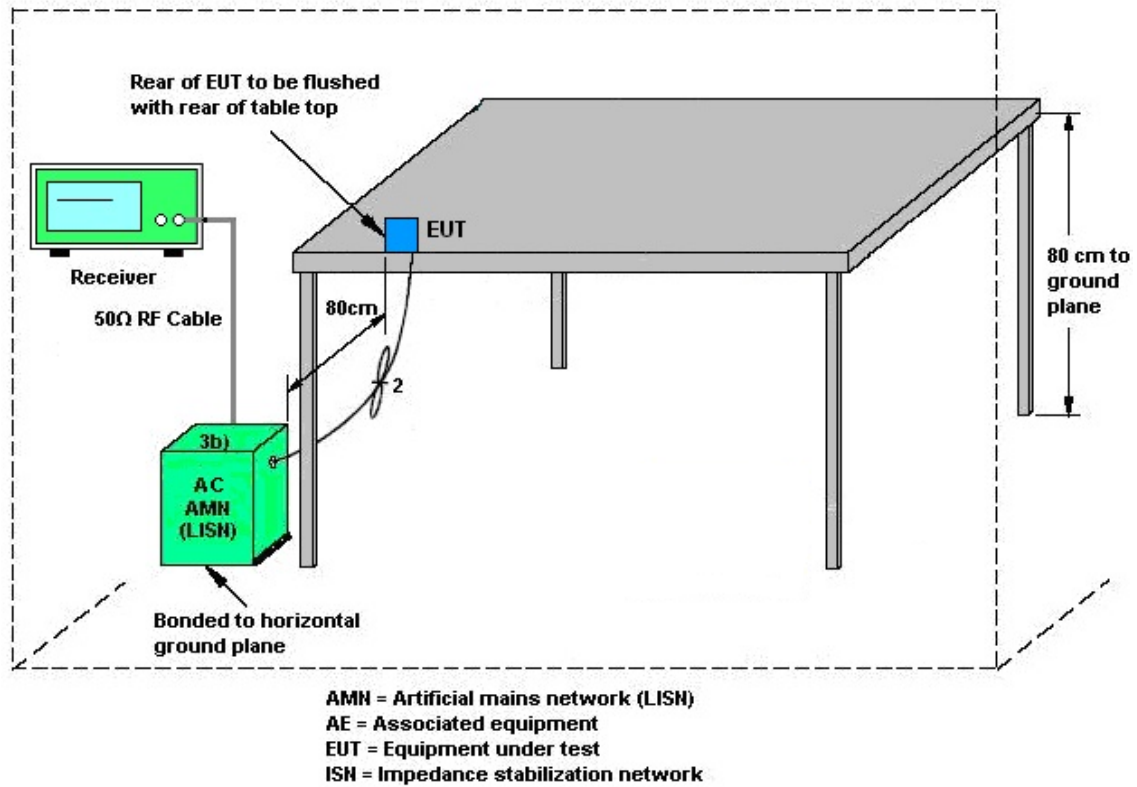
#### 3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

#### 3.3.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was 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 should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

### 3.3.4 Test Setup



### 3.3.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



## **3.4 Antenna Requirements**

### **3.4.1 Standard Applicable**

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **3.4.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **3.4.3 Antenna Gain**

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



## 4 List of Measuring Equipment

| Instrument            | Brand Name      | Model No.                     | Serial No.                       | Characteristics          | Calibration Date | Test Date                     | Due Date      | Remark                |
|-----------------------|-----------------|-------------------------------|----------------------------------|--------------------------|------------------|-------------------------------|---------------|-----------------------|
| Hygrometer            | Testo           | 608-H1                        | 34893241                         | N/A                      | Mar. 02, 2020    | Dec. 30, 2020                 | Mar. 01, 2021 | Conducted (TH05-HY)   |
| Power Sensor          | DARE            | RPR3006W                      | 13I00030SNO31                    | 10MHz ~ 6GHz             | Jan. 22, 2020    | Dec. 30, 2020                 | Jan. 21, 2021 | Conducted (TH05-HY)   |
| Spectrum Analyzer     | Rohde & Schwarz | FSQ26                         | 200578/026                       | 20Hz ~ 26.5GHz           | Jul. 17, 2020    | Dec. 30, 2020                 | Jul. 16, 2021 | Conducted (TH05-HY)   |
| Switch Box & RF Cable | EM Electronics  | EMSW18SE                      | SW200302                         | N/A                      | Mar. 17, 2020    | Dec. 30, 2020                 | Mar. 16, 2021 | Conducted (TH05-HY)   |
| Loop Antenna          | Rohde & Schwarz | HFH2-Z2                       | 100488                           | 9 kHz~30 MHz             | Jul. 14, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Jul. 13, 2021 | Radiation (03CH15-HY) |
| Bilog Antenna         | TESEQ           | CBL 6111D & 00800N1D01N-06    | 41912 & 05                       | 30MHz~1GHz               | Feb. 09, 2020    | Jan. 16, 2021~ Feb. 07, 2021  | Feb. 08, 2021 | Radiation (03CH15-HY) |
| Bilog Antenna         | TESEQ           | CBL 6111D & 00800N1D01N-06    | 41912 & 05                       | 30MHz~1GHz               | Feb. 08, 2021    | Feb. 08, 2021 ~ Feb. 11, 2021 | Feb. 07, 2022 | Radiation (03CH15-HY) |
| Amplifier             | SONOMA          | 310N                          | 363440                           | 9kHz~1GHz                | Dec. 28, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Dec. 27, 2021 | Radiation (03CH15-HY) |
| Horn Antenna          | SCHWARZBECK     | BBHA 9120 D                   | 9120D-01620                      | 1GHz~18GHz               | Nov. 03, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Nov. 02, 2021 | Radiation (03CH15-HY) |
| SHF-EHF Horn Antenna  | SCHWARZBECK     | BBHA 9170                     | BBHA9170251                      | 18GHz~40GHz              | Dec. 02, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Dec. 01, 2021 | Radiation (03CH15-HY) |
| Preamplifier          | Jet-Power       | JPA0118-55-303                | 1710001800055006                 | 1GHz~18GHz               | May 07, 2020     | Jan. 16, 2021 ~ Feb. 11, 2021 | May 06, 2021  | Radiation (03CH15-HY) |
| Preamplifier          | Keysight        | 83017A                        | MY53270195                       | 1GHz~26.5GHz             | Aug. 21, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Aug. 20, 2021 | Radiation (03CH15-HY) |
| Preamplifier          | EMEC            | EM18G40G                      | 0600789                          | 18-40GHz                 | Oct. 27, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Oct. 26, 2021 | Radiation (03CH15-HY) |
| EMI Test Receiver     | Keysight        | N9038A(MXE)                   | MY54130085                       | 20MHz~8.4GHz             | Nov. 02, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Nov. 01, 2021 | Radiation (03CH15-HY) |
| Spectrum Analyzer     | Agilent         | E4446A                        | MY50180136                       | 3Hz~44GHz                | May 04, 2020     | Jan. 16, 2021 ~ Feb. 11, 2021 | May 03, 2021  | Radiation (03CH15-HY) |
| Antenna Mast          | ChainTek        | MBS-520-1                     | N/A                              | 1m~4m                    | N/A              | Jan. 16, 2021 ~ Feb. 11, 2021 | N/A           | Radiation (03CH15-HY) |
| Turn Table            | ChainTek        | T-200-S-1                     | N/A                              | 0~360 Degree             | N/A              | Jan. 16, 2021 ~ Feb. 11, 2021 | N/A           | Radiation (03CH15-HY) |
| Software              | Audix           | E3 6.2009-8-24 (k5)           | RK-000451                        | N/A                      | N/A              | Jan. 16, 2021 ~ Feb. 11, 2021 | N/A           | Radiation (03CH15-HY) |
| RF Cable              | HUBER + SUHNER  | SUCOFLEX 104, 102E            | MY36980/4, MY9838/4PE, 508405/2E | 30MHz~18G                | Nov. 16, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Nov. 15, 2021 | Radiation (03CH15-HY) |
| RF Cable              | HUBER + SUHNER  | SUCOFLEX 102                  | 505134/2                         | 30MHz~40GHz              | Feb. 25, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Feb. 24, 2021 | Radiation (03CH15-HY) |
| RF Cable              | HUBER + SUHNER  | SUCOFLEX 102                  | 800740/2                         | 30MHz~40GHz              | Feb. 25, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Feb. 24, 2021 | Radiation (03CH15-HY) |
| RF Cable              | HUBER + SUHNER  | SUCOFLEX 104                  | MY9837/4PE                       | 9kHz~30MHz               | Mar. 12, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Mar. 11, 2021 | Radiation (03CH15-HY) |
| Filter                | Wainwright      | WLJ4-1000-15 30-6000-40ST     | SN4                              | 1.53GHz Low Pass Filter  | Jul. 03, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Jul. 02, 2021 | Radiation (03CH15-HY) |
| Filter                | Wainwright      | WHKX8-5872. 5-6750-18000-40ST | SN6                              | 6.75GHz High Pass Filter | Jul. 01, 2020    | Jan. 16, 2021 ~ Feb. 11, 2021 | Jun. 30, 2021 | Radiation (03CH15-HY) |



| Instrument        | Brand Name      | Model No.              | Serial No.             | Characteristics | Calibration Date | Test Date     | Due Date      | Remark               |
|-------------------|-----------------|------------------------|------------------------|-----------------|------------------|---------------|---------------|----------------------|
| AC Power Source   | ChainTek        | APC-1000W              | N/A                    | N/A             | N/A              | Jan. 06, 2021 | N/A           | Conduction (CO05-HY) |
| EMI Test Receiver | Rohde & Schwarz | ESR3                   | 102317                 | 9kHz~3.6GHz     | Sep. 11, 2020    | Jan. 06, 2021 | Sep. 10, 2021 | Conduction (CO05-HY) |
| Hygrometer        | Testo           | 608-H1                 | 34913912               | N/A             | Nov. 18, 2020    | Jan. 06, 2021 | Nov. 17, 2021 | Conduction (CO05-HY) |
| ISN               | TESEQ           | ISN T8-Cat6            | 41537                  | N/A             | Feb. 03, 2020    | Jan. 06, 2021 | Feb. 02, 2021 | Conduction (CO05-HY) |
| LISN              | Rohde & Schwarz | ENV216                 | 100081                 | 9kHz~30MHz      | Nov. 16, 2020    | Jan. 06, 2021 | Nov. 15, 2021 | Conduction (CO05-HY) |
| Software          | Rohde & Schwarz | EMC32 V10.30           | N/A                    | N/A             | N/A              | Jan. 06, 2021 | N/A           | Conduction (CO05-HY) |
| LISN Cable        | MVE             | RG-400                 | 260260                 | N/A             | Dec. 31, 2020    | Jan. 06, 2021 | Dec. 30, 2021 | Conduction (CO05-HY) |
| Pulse Limiter     | SCHWARZBECK     | ESHVTS<br>9561-F N3-Z2 | 109561-F<br>N003730851 | 9kHz-200MHz     | Nov. 02, 2020    | Jan. 06, 2021 | Nov. 01, 2021 | Conduction (CO05-HY) |



## 5 Uncertainty of Evaluation

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

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 2.3 |
|-------------------------------------------------------------------------|-----|

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

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.7 |
|-------------------------------------------------------------------------|-----|

### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.3 |
|-------------------------------------------------------------------------|-----|

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

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.9 |
|-------------------------------------------------------------------------|-----|

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

|                |            |                    |       |    |
|----------------|------------|--------------------|-------|----|
| Test Engineer: | Rebecca Li | Temperature:       | 20~21 | °C |
| Test Date:     | 2020/12/30 | Relative Humidity: | 55~56 | %  |

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

| Band IV single antenna |           |     |     |             |                               |       |     |                                 |       |          |       |           |
|------------------------|-----------|-----|-----|-------------|-------------------------------|-------|-----|---------------------------------|-------|----------|-------|-----------|
| Mod.                   | Data Rate | NTX | CH. | Freq. (MHz) | Average Conducted Power (dBm) |       |     | FCC Conducted Power Limit (dBm) |       | DG (dBi) |       | Pass/Fail |
|                        |           |     |     |             | Ant 1                         | Ant 2 | SUM | Ant 1                           | Ant 2 | Ant 1    | Ant 2 |           |
| 11a                    | 6Mbps     | 1   | 149 | 5745        | 12.00                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| 11a                    | 6Mbps     | 1   | 157 | 5785        | 11.70                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| 11a                    | 6Mbps     | 1   | 165 | 5825        | 11.50                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| HT20                   | MCS0      | 1   | 149 | 5745        | 11.70                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| HT20                   | MCS0      | 1   | 157 | 5785        | 11.80                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| HT20                   | MCS0      | 1   | 165 | 5825        | 11.50                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| HT40                   | MCS0      | 1   | 151 | 5755        | 12.00                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| HT40                   | MCS0      | 1   | 159 | 5795        | 12.00                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| VHT20                  | MCS0      | 1   | 149 | 5745        | 11.50                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| VHT20                  | MCS0      | 1   | 157 | 5785        | 11.60                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| VHT20                  | MCS0      | 1   | 165 | 5825        | 11.40                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| VHT40                  | MCS0      | 1   | 151 | 5755        | 11.90                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| VHT40                  | MCS0      | 1   | 159 | 5795        | 11.70                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |
| VHT80                  | MCS0      | 1   | 155 | 5775        | 11.10                         | -     |     | 30.00                           | -     | 1.70     | -     | Pass      |



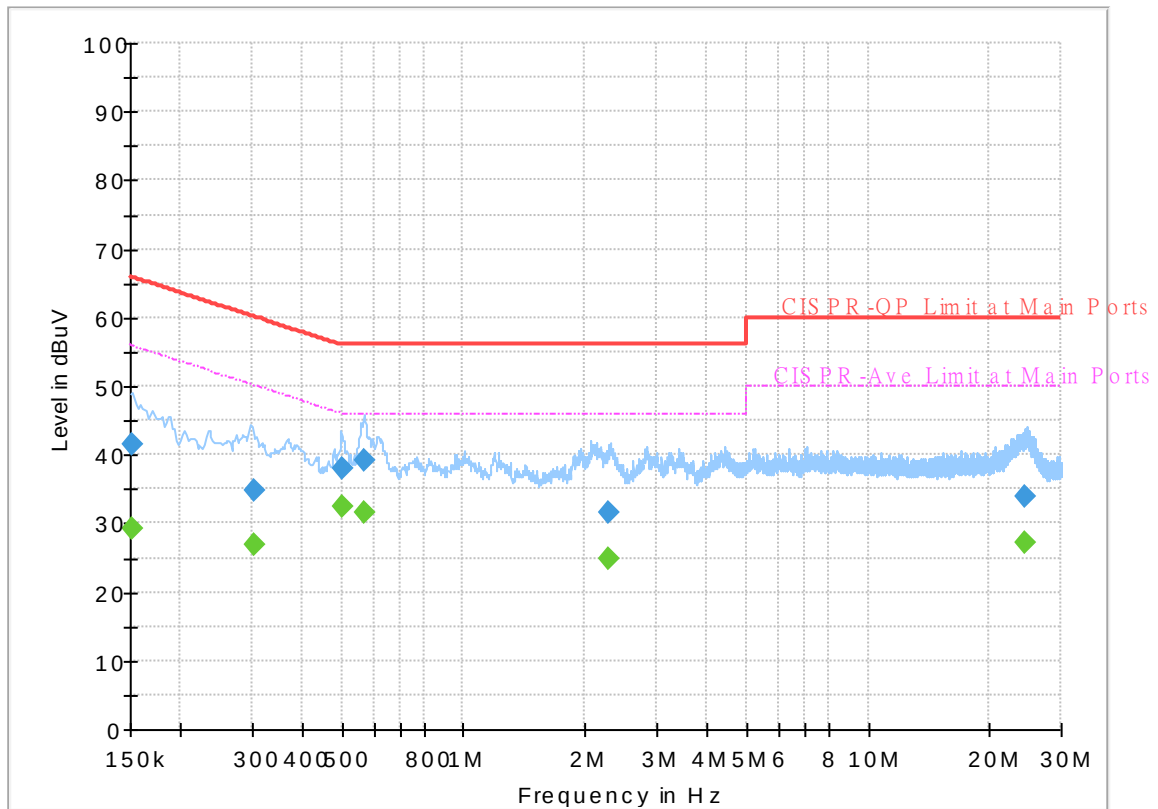
## **Appendix B. AC Conducted Emission Test Results**

|                        |              |                            |        |
|------------------------|--------------|----------------------------|--------|
| <b>Test Engineer :</b> | Howard Huang | <b>Temperature :</b>       | 23~26℃ |
|                        |              | <b>Relative Humidity :</b> | 40~50% |

## EUT Information

Report NO : 0D1806  
Test Mode : Mode 1  
Test Voltage : 120Vac/60Hz  
Phase : Line

Full Spectrum



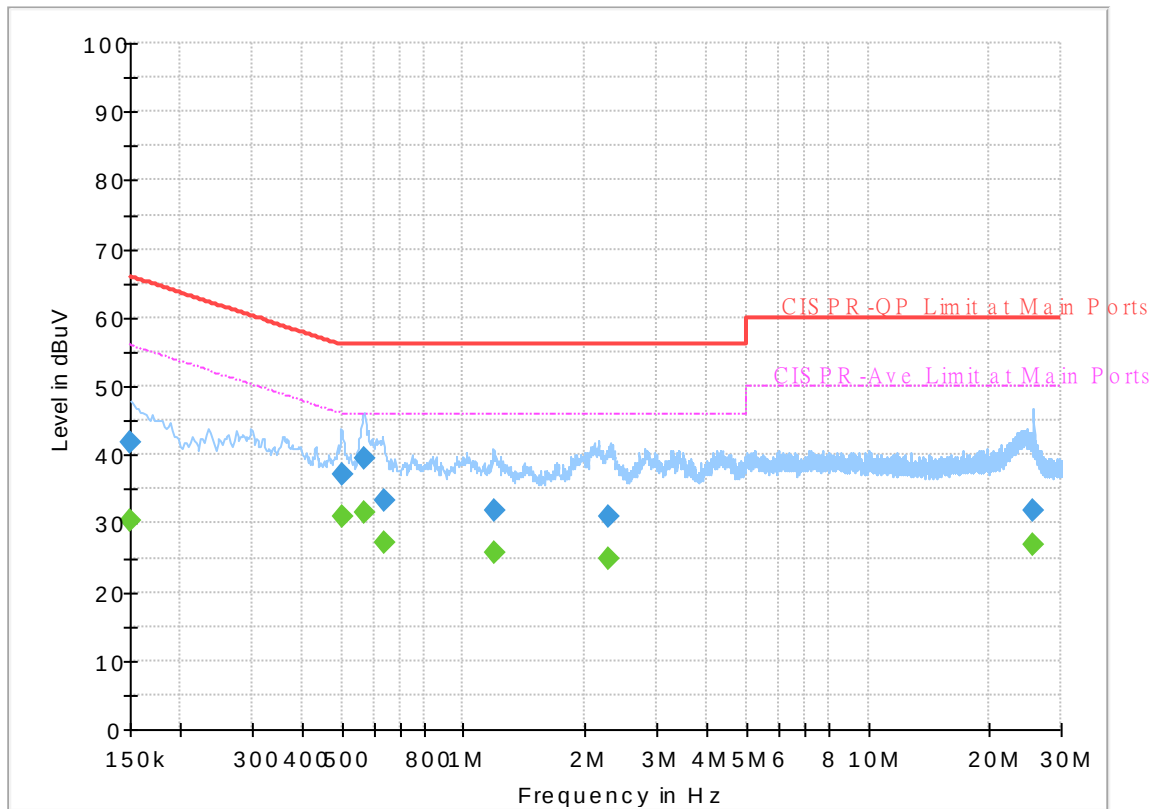
## Final Result

| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|------|--------|------------|
| 0.151755        | ---              | 29.18           | 55.90        | 26.72       | L1   | OFF    | 19.7       |
| 0.151755        | 41.58            | ---             | 65.90        | 24.32       | L1   | OFF    | 19.7       |
| 0.303000        | ---              | 26.97           | 50.16        | 23.19       | L1   | OFF    | 19.7       |
| 0.303000        | 34.74            | ---             | 60.16        | 25.42       | L1   | OFF    | 19.7       |
| 0.501000        | ---              | 32.37           | 46.00        | 13.63       | L1   | OFF    | 19.9       |
| 0.501000        | 38.01            | ---             | 56.00        | 17.99       | L1   | OFF    | 19.9       |
| 0.566520        | ---              | 31.55           | 46.00        | 14.45       | L1   | OFF    | 19.9       |
| 0.566520        | 39.14            | ---             | 56.00        | 16.86       | L1   | OFF    | 19.9       |
| 2.294250        | ---              | 24.97           | 46.00        | 21.03       | L1   | OFF    | 20.2       |
| 2.294250        | 31.56            | ---             | 56.00        | 24.44       | L1   | OFF    | 20.2       |
| 24.531000       | ---              | 27.31           | 50.00        | 22.69       | L1   | OFF    | 20.7       |
| 24.531000       | 33.87            | ---             | 60.00        | 26.13       | L1   | OFF    | 20.7       |

## EUT Information

Report NO : 0D1806  
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) |
|-----------------|------------------|-----------------|--------------|-------------|------|--------|------------|
| 0.150000        | ---              | 30.48           | 56.00        | 25.52       | N    | OFF    | 19.7       |
| 0.150000        | 41.93            | ---             | 66.00        | 24.07       | N    | OFF    | 19.7       |
| 0.499470        | ---              | 30.87           | 46.01        | 15.14       | N    | OFF    | 19.9       |
| 0.499470        | 37.02            | ---             | 56.01        | 18.99       | N    | OFF    | 19.9       |
| 0.566160        | ---              | 31.58           | 46.00        | 14.42       | N    | OFF    | 20.0       |
| 0.566160        | 39.40            | ---             | 56.00        | 16.60       | N    | OFF    | 20.0       |
| 0.638250        | ---              | 27.06           | 46.00        | 18.94       | N    | OFF    | 20.0       |
| 0.638250        | 33.29            | ---             | 56.00        | 22.71       | N    | OFF    | 20.0       |
| 1.189500        | ---              | 25.66           | 46.00        | 20.34       | N    | OFF    | 20.3       |
| 1.189500        | 31.73            | ---             | 56.00        | 24.27       | N    | OFF    | 20.3       |
| 2.280390        | ---              | 24.90           | 46.00        | 21.10       | N    | OFF    | 20.2       |
| 2.280390        | 31.06            | ---             | 56.00        | 24.94       | N    | OFF    | 20.2       |
| 25.721250       | ---              | 26.85           | 50.00        | 23.15       | N    | OFF    | 20.9       |
| 25.721250       | 31.83            | ---             | 60.00        | 28.17       | N    | OFF    | 20.9       |

## Appendix C. Radiated Spurious Emission

|                 |                                       |                     |               |
|-----------------|---------------------------------------|---------------------|---------------|
| Test Engineer : | Leo Lee, Mancy Chou, and Bigshow Wang | Temperature :       | 22.1 ~ 23.1°C |
|                 |                                       | Relative Humidity : | 55 ~ 60%      |

**<Sample 1>**

## Band 4 - 5725~5850MHz

### WIFI 802.11a (Band edge @ 3m)

[illegible]

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

| WIFI<br>Ant.<br>1                     | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11a<br/>CH 165<br/>5825MHz</b> |                                                                                             | 11650                | 49.13               | -24.87                  | 74                          | 55.4                      | 39.7                          | 15.11                  | 61.08                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 17475                | 52.74               | -15.46                  | 68.2                        | 49.83                     | 42.78                         | 18.66                  | 58.53                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 18000                | 60.67               | -13.33                  | 74                          | 50.53                     | 49                            | 19.04                  | 57.9                       | 100                  | 31                      | P                       | H               |
|                                       |                                                                                             | 18000                | 50.5                | -3.5                    | 54                          | 40.36                     | 49                            | 19.04                  | 57.9                       | 100                  | 31                      | A                       | H               |
|                                       |                                                                                             | 11650                | 49.38               | -24.62                  | 74                          | 55.65                     | 39.7                          | 15.11                  | 61.08                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 17475                | 52.32               | -15.88                  | 68.2                        | 49.41                     | 42.78                         | 18.66                  | 58.53                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 17974.8              | 60.11               | -13.89                  | 74                          | 50.47                     | 48.55                         | 19.02                  | 57.93                      | 100                  | 21                      | P                       | V               |
|                                       |                                                                                             | 17974.8              | 49.93               | -4.07                   | 54                          | 40.29                     | 48.55                         | 19.02                  | 57.93                      | 100                  | 21                      | A                       | 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 802.11n HT20 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                    | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 165<br>5825MHz | *                                                                                           | 5825                 | 98.61               | -                       | -                           | 86.31                     | 31.9                          | 10.62                  | 30.22                      | 250                  | 298                     | P                       | H               |
|                                      | *                                                                                           | 5825                 | 91.56               | -                       | -                           | 79.26                     | 31.9                          | 10.62                  | 30.22                      | 250                  | 298                     | A                       | H               |
|                                      |                                                                                             | 5850.6               | 57.62               | -63.21                  | 120.83                      | 45.22                     | 32                            | 10.64                  | 30.24                      | 250                  | 298                     | P                       | H               |
|                                      |                                                                                             | 5855.2               | 52.98               | -57.76                  | 110.74                      | 40.58                     | 32.01                         | 10.64                  | 30.25                      | 250                  | 298                     | P                       | H               |
|                                      |                                                                                             | 5877.6               | 52.07               | -51.2                   | 103.27                      | 39.62                     | 32.06                         | 10.65                  | 30.26                      | 250                  | 298                     | P                       | H               |
|                                      |                                                                                             | 5944.2               | 51.49               | -16.71                  | 68.2                        | 38.91                     | 32.19                         | 10.7                   | 30.31                      | 250                  | 298                     | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      | *                                                                                           | 5825                 | 96.83               | -                       | -                           | 84.53                     | 31.9                          | 10.62                  | 30.22                      | 100                  | 266                     | P                       | V               |
|                                      | *                                                                                           | 5825                 | 89.31               | -                       | -                           | 77.01                     | 31.9                          | 10.62                  | 30.22                      | 100                  | 266                     | A                       | V               |
|                                      |                                                                                             | 5850.2               | 55.75               | -65.99                  | 121.74                      | 43.35                     | 32                            | 10.64                  | 30.24                      | 100                  | 266                     | P                       | V               |
|                                      |                                                                                             | 5855.2               | 52.07               | -58.67                  | 110.74                      | 39.67                     | 32.01                         | 10.64                  | 30.25                      | 100                  | 266                     | P                       | V               |
|                                      |                                                                                             | 5912.8               | 51.75               | -25.45                  | 77.2                        | 39.23                     | 32.13                         | 10.68                  | 30.29                      | 100                  | 266                     | P                       | V               |
|                                      |                                                                                             | 5946                 | 52.47               | -15.73                  | 68.2                        | 39.89                     | 32.19                         | 10.7                   | 30.31                      | 100                  | 266                     | 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<br>Ant.<br>1                              | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11n<br/>HT20<br/>CH 165<br/>5825MHz</b> |                                                                                             | 11650                | 48.86               | -25.14                  | 74                          | 55.13                     | 39.7                          | 15.11                  | 61.08                      | 100                  | 0                       | P                       | H               |
|                                                |                                                                                             | 17475                | 52.28               | -15.92                  | 68.2                        | 49.37                     | 42.78                         | 18.66                  | 58.53                      | 100                  | 0                       | P                       | H               |
|                                                |                                                                                             | 18000                | 59.91               | -14.09                  | 74                          | 49.77                     | 49                            | 19.04                  | 57.9                       | 100                  | 30                      | P                       | H               |
|                                                |                                                                                             | 18000                | 49.8                | -4.2                    | 54                          | 39.66                     | 49                            | 19.04                  | 57.9                       | 100                  | 30                      | A                       | H               |
|                                                |                                                                                             | 11650                | 49.3                | -24.7                   | 74                          | 55.57                     | 39.7                          | 15.11                  | 61.08                      | 100                  | 0                       | P                       | V               |
|                                                |                                                                                             | 17475                | 52.18               | -16.02                  | 68.2                        | 49.27                     | 42.78                         | 18.66                  | 58.53                      | 100                  | 0                       | P                       | V               |
|                                                |                                                                                             | 17993.7              | 60.31               | -13.69                  | 74                          | 50.29                     | 48.89                         | 19.04                  | 57.91                      | 100                  | 20                      | P                       | V               |
|                                                |                                                                                             | 17993.7              | 50.17               | -3.83                   | 54                          | 40.15                     | 48.89                         | 19.04                  | 57.91                      | 100                  | 20                      | A                       | 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 802.11n HT40 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                    | Note                                                         | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|--------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT40<br>CH 151<br>5755MHz |                                                              | 5606.6               | 51.1                | -17.1                   | 68.2                        | 39.17                     | 31.61                         | 10.39                  | 30.07                      | 259                  | 297                     | P                       | H               |
|                                      |                                                              | 5695.8               | 51.17               | -50.93                  | 102.1                       | 39.11                     | 31.7                          | 10.49                  | 30.13                      | 259                  | 297                     | P                       | H               |
|                                      |                                                              | 5720                 | 63.06               | -47.74                  | 110.8                       | 50.96                     | 31.74                         | 10.51                  | 30.15                      | 259                  | 297                     | P                       | H               |
|                                      |                                                              | 5723.6               | 65.41               | -53.6                   | 119.01                      | 53.29                     | 31.75                         | 10.52                  | 30.15                      | 259                  | 297                     | P                       | H               |
|                                      | *                                                            | 5755                 | 95.75               | -                       | -                           | 83.57                     | 31.8                          | 10.55                  | 30.17                      | 259                  | 297                     | P                       | H               |
|                                      | *                                                            | 5755                 | 88.06               | -                       | -                           | 75.88                     | 31.8                          | 10.55                  | 30.17                      | 259                  | 297                     | A                       | H               |
|                                      |                                                              | 5854.675             | 51.02               | -60.52                  | 111.54                      | 38.62                     | 32.01                         | 10.64                  | 30.25                      | 259                  | 297                     | P                       | H               |
|                                      |                                                              | 5873.33              | 51.57               | -54.1                   | 105.67                      | 39.13                     | 32.05                         | 10.65                  | 30.26                      | 259                  | 297                     | P                       | H               |
|                                      |                                                              | 5887.27              | 51.95               | -44.14                  | 96.09                       | 39.49                     | 32.07                         | 10.66                  | 30.27                      | 259                  | 297                     | P                       | H               |
|                                      |                                                              | 5933.395             | 51.98               | -16.22                  | 68.2                        | 39.42                     | 32.17                         | 10.69                  | 30.3                       | 259                  | 297                     | P                       | H               |
|                                      |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                              | 5621                 | 51.12               | -17.08                  | 68.2                        | 39.16                     | 31.64                         | 10.4                   | 30.08                      | 100                  | 261                     | P                       | V               |
|                                      |                                                              | 5693.8               | 51.22               | -49.41                  | 100.63                      | 39.17                     | 31.7                          | 10.48                  | 30.13                      | 100                  | 261                     | P                       | V               |
|                                      |                                                              | 5719.2               | 65.83               | -44.75                  | 110.58                      | 53.73                     | 31.74                         | 10.51                  | 30.15                      | 100                  | 261                     | P                       | V               |
|                                      |                                                              | 5723.4               | 66.81               | -51.74                  | 118.55                      | 54.69                     | 31.75                         | 10.52                  | 30.15                      | 100                  | 261                     | P                       | V               |
|                                      | *                                                            | 5755                 | 94                  | -                       | -                           | 81.82                     | 31.8                          | 10.55                  | 30.17                      | 100                  | 261                     | P                       | V               |
|                                      | *                                                            | 5755                 | 86.96               | -                       | -                           | 74.78                     | 31.8                          | 10.55                  | 30.17                      | 100                  | 261                     | A                       | V               |
|                                      |                                                              | 5854.06              | 51.46               | -61.48                  | 112.94                      | 39.05                     | 32.01                         | 10.64                  | 30.24                      | 100                  | 261                     | P                       | V               |
|                                      |                                                              | 5870.05              | 50.76               | -55.82                  | 106.58                      | 38.33                     | 32.04                         | 10.65                  | 30.26                      | 100                  | 261                     | P                       | V               |
|                                      |                                                              | 5911.255             | 51.73               | -26.61                  | 78.34                       | 39.22                     | 32.12                         | 10.68                  | 30.29                      | 100                  | 261                     | P                       | V               |
|                                      |                                                              | 5934.625             | 51.58               | -16.62                  | 68.2                        | 39.02                     | 32.17                         | 10.69                  | 30.3                       | 100                  | 261                     | P                       | V               |
|                                      |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                      |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                               | 1. No other spurious found.                                  |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      | 2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



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

| WIFI<br>Ant.<br>1                              | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11n<br/>HT40<br/>CH 151<br/>5755MHz</b> |                                                                                             | 11510                | 48.28               | -25.72                  | 74                          | 54.06                     | 40.09                         | 15.04                  | 60.91                      | 100                  | 0                       | P                       | H               |
|                                                |                                                                                             | 17265                | 50.32               | -17.88                  | 68.2                        | 49.67                     | 40.93                         | 18.5                   | 58.78                      | 100                  | 0                       | P                       | H               |
|                                                |                                                                                             | 18000                | 59.26               | -14.74                  | 74                          | 49.12                     | 49                            | 19.04                  | 57.9                       | 100                  | 21                      | P                       | H               |
|                                                |                                                                                             | 18000                | 50.15               | -3.85                   | 54                          | 40.01                     | 49                            | 19.04                  | 57.9                       | 100                  | 21                      | A                       | H               |
|                                                |                                                                                             | 11510                | 48.82               | -25.18                  | 74                          | 54.6                      | 40.09                         | 15.04                  | 60.91                      | 100                  | 0                       | P                       | V               |
|                                                |                                                                                             | 17265                | 50.11               | -18.09                  | 68.2                        | 49.46                     | 40.93                         | 18.5                   | 58.78                      | 100                  | 0                       | P                       | V               |
|                                                |                                                                                             | 17978                | 59.07               | -14.93                  | 74                          | 49.37                     | 48.6                          | 19.03                  | 57.93                      | 100                  | 46                      | P                       | V               |
|                                                |                                                                                             | 17978                | 49.58               | -4.42                   | 54                          | 39.88                     | 48.6                          | 19.03                  | 57.93                      | 100                  | 46                      | A                       | 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 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                      | Note                                                         | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|----------------------------------------|--------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT80<br>CH 155<br>5775MHz |                                                              | 5634.6               | 51.46               | -16.74                  | 68.2                        | 39.46                     | 31.67                         | 10.42                  | 30.09                      | 255                  | 297                     | P                       | H               |
|                                        |                                                              | 5697.2               | 53.65               | -49.49                  | 103.14                      | 41.59                     | 31.7                          | 10.49                  | 30.13                      | 255                  | 297                     | P                       | H               |
|                                        |                                                              | 5717.8               | 59.27               | -50.91                  | 110.18                      | 47.17                     | 31.74                         | 10.51                  | 30.15                      | 255                  | 297                     | P                       | H               |
|                                        |                                                              | 5724                 | 60.91               | -59.01                  | 119.92                      | 48.79                     | 31.75                         | 10.52                  | 30.15                      | 255                  | 297                     | P                       | H               |
|                                        | *                                                            | 5775                 | 92.25               | -                       | -                           | 80.07                     | 31.8                          | 10.57                  | 30.19                      | 255                  | 297                     | P                       | H               |
|                                        | *                                                            | 5775                 | 85.07               | -                       | -                           | 72.89                     | 31.8                          | 10.57                  | 30.19                      | 255                  | 297                     | A                       | H               |
|                                        |                                                              | 5849.96              | 59.05               | -75.15                  | 134.2                       | 46.66                     | 32                            | 10.63                  | 30.24                      | 255                  | 297                     | P                       | H               |
|                                        |                                                              | 5858.16              | 57.85               | -52.06                  | 109.91                      | 45.44                     | 32.02                         | 10.64                  | 30.25                      | 255                  | 297                     | P                       | H               |
|                                        |                                                              | 5908.795             | 51.56               | -28.6                   | 80.16                       | 39.04                     | 32.12                         | 10.68                  | 30.28                      | 255                  | 297                     | P                       | H               |
|                                        |                                                              | 5931.14              | 52.03               | -16.17                  | 68.2                        | 39.48                     | 32.16                         | 10.69                  | 30.3                       | 255                  | 297                     | P                       | H               |
|                                        |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                        |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                        |                                                              | 5619.6               | 51.4                | -16.8                   | 68.2                        | 39.44                     | 31.64                         | 10.4                   | 30.08                      | 100                  | 268                     | P                       | V               |
|                                        |                                                              | 5683.8               | 53.61               | -39.64                  | 93.25                       | 41.56                     | 31.7                          | 10.47                  | 30.12                      | 100                  | 268                     | P                       | V               |
|                                        |                                                              | 5718.4               | 58.89               | -51.46                  | 110.35                      | 46.79                     | 31.74                         | 10.51                  | 30.15                      | 100                  | 268                     | P                       | V               |
|                                        |                                                              | 5724                 | 61.27               | -58.65                  | 119.92                      | 49.15                     | 31.75                         | 10.52                  | 30.15                      | 100                  | 268                     | P                       | V               |
|                                        | *                                                            | 5775                 | 91.21               | -                       | -                           | 79.03                     | 31.8                          | 10.57                  | 30.19                      | 100                  | 268                     | P                       | V               |
|                                        | *                                                            | 5775                 | 83.84               | -                       | -                           | 71.66                     | 31.8                          | 10.57                  | 30.19                      | 100                  | 268                     | A                       | V               |
|                                        |                                                              | 5851.19              | 54.63               | -64.86                  | 119.49                      | 42.23                     | 32                            | 10.64                  | 30.24                      | 100                  | 268                     | P                       | V               |
|                                        |                                                              | 5861.645             | 55.05               | -53.89                  | 108.94                      | 42.64                     | 32.02                         | 10.64                  | 30.25                      | 100                  | 268                     | P                       | V               |
|                                        |                                                              | 5877.02              | 52.36               | -51.34                  | 103.7                       | 39.92                     | 32.05                         | 10.65                  | 30.26                      | 100                  | 268                     | P                       | V               |
|                                        |                                                              | 5937.495             | 52.79               | -15.41                  | 68.2                        | 40.22                     | 32.17                         | 10.7                   | 30.3                       | 100                  | 268                     | P                       | V               |
|                                        |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                        |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                                 | 1. No other spurious found.                                  |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                        | 2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |

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

| WIFI<br>Ant.<br>1                                | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11ac<br/>VHT80<br/>CH 155<br/>5775MHz</b> |                                                                                             | 11550                | 49.44               | -24.56                  | 74                          | 55.29                     | 40.05                         | 15.06                  | 60.96                      | 100                  | 0                       | P                       | H               |
|                                                  |                                                                                             | 17325                | 51.3                | -16.9                   | 68.2                        | 50.18                     | 41.28                         | 18.55                  | 58.71                      | 100                  | 0                       | P                       | H               |
|                                                  |                                                                                             | 18000                | 59.71               | -14.29                  | 74                          | 49.57                     | 49                            | 19.04                  | 57.9                       | 100                  | 28                      | P                       | H               |
|                                                  |                                                                                             | 18000                | 50.11               | -3.89                   | 54                          | 39.97                     | 49                            | 19.04                  | 57.9                       | 100                  | 28                      | A                       | H               |
|                                                  |                                                                                             | 11550                | 49.36               | -24.64                  | 74                          | 55.21                     | 40.05                         | 15.06                  | 60.96                      | 100                  | 0                       | P                       | V               |
|                                                  |                                                                                             | 17325                | 51.36               | -16.84                  | 68.2                        | 50.24                     | 41.28                         | 18.55                  | 58.71                      | 100                  | 0                       | P                       | V               |
|                                                  |                                                                                             | 17989                | 59.71               | -14.29                  | 74                          | 49.79                     | 48.8                          | 19.03                  | 57.91                      | 100                  | 52                      | P                       | V               |
|                                                  |                                                                                             | 17989                | 49.78               | -4.22                   | 54                          | 39.86                     | 48.8                          | 19.03                  | 57.91                      | 100                  | 52                      | A                       | V               |
| <b>Remark</b>                                    | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



**Emission above 18GHz**  
**5GHz WIFI 802.11ac VHT80 (SHF)**

| WIFI<br>Ant.<br>1                                            | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|--------------------------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| <b>5GHz</b><br><b>802.11ac</b><br><b>VHT80</b><br><b>SHF</b> |                                                                            | 20288                | 37.52               | -36.48                  | 74                          | 42.64                   | 38.56                         | 11.22                  | 54.9                       | 150                  | 0                       | P                     | H             |
|                                                              |                                                                            | 35732                | 46.21               | -21.99                  | 68.2                        | 44.26                   | 42.05                         | 18.6                   | 58.7                       | 150                  | 0                       | P                     | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                                              |                                                                            | 22840                | 40.09               | -33.91                  | 74                          | 43.16                   | 38.76                         | 12.4                   | 54.23                      | 150                  | 0                       | P                     | V             |
|                                                              |                                                                            | 35578                | 46.15               | -22.05                  | 68.2                        | 44.23                   | 42.02                         | 18.6                   | 58.7                       | 150                  | 0                       | P                     | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                                              |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| <b>Remark</b>                                                | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |



**Emission below 1GHz**  
**5GHz WIFI 802.11ac VHT80 (LF)**

| WIFI<br>Ant.<br>1                         | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| <b>5GHz<br/>802.11ac<br/>VHT80<br/>LF</b> |                                                                            | 67.83                | 32.48               | -7.52                   | 40                          | 51.35                   | 12.54                         | 1.13                   | 32.54                      | 265                  | 183                     | Q                     | H             |
|                                           |                                                                            | 94.99                | 37.28               | -6.22                   | 43.5                        | 52.86                   | 15.52                         | 1.38                   | 32.48                      | -                    | -                       | P                     | H             |
|                                           |                                                                            | 176.47               | 37.38               | -6.12                   | 43.5                        | 52.55                   | 15.39                         | 1.92                   | 32.48                      | -                    | -                       | P                     | H             |
|                                           |                                                                            | 285.11               | 38.62               | -7.38                   | 46                          | 50.01                   | 18.71                         | 2.36                   | 32.46                      | -                    | -                       | P                     | H             |
|                                           |                                                                            | 746.83               | 38.49               | -7.51                   | 46                          | 39.57                   | 27.66                         | 3.71                   | 32.45                      | -                    | -                       | P                     | H             |
|                                           |                                                                            | 896.21               | 37.99               | -8.01                   | 46                          | 36.91                   | 28.58                         | 4.15                   | 31.65                      | -                    | -                       | P                     | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            | 40.67                | 33.55               | -6.45                   | 40                          | 46.18                   | 19.11                         | 0.82                   | 32.56                      | 100                  | 284                     | Q                     | V             |
|                                           |                                                                            | 94.99                | 36.35               | -7.15                   | 43.5                        | 51.93                   | 15.52                         | 1.38                   | 32.48                      | -                    | -                       | P                     | V             |
|                                           |                                                                            | 176.47               | 36.47               | -7.03                   | 43.5                        | 51.64                   | 15.39                         | 1.92                   | 32.48                      | -                    | -                       | P                     | V             |
|                                           |                                                                            | 298.69               | 34.04               | -11.96                  | 46                          | 45.06                   | 19.08                         | 2.39                   | 32.49                      | -                    | -                       | P                     | V             |
|                                           |                                                                            | 715.79               | 36.83               | -9.17                   | 46                          | 38.98                   | 26.67                         | 3.63                   | 32.45                      | -                    | -                       | P                     | V             |
|                                           |                                                                            | 897.18               | 37.7                | -8.3                    | 46                          | 36.62                   | 28.57                         | 4.15                   | 31.64                      | -                    | -                       | P                     | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| <b>Remark</b>                             | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |



&lt;Sample 2&gt;

## Band 4 - 5725~5850MHz

## WIFI 802.11ac VHT80 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                      | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT80<br>CH 155<br>5775MHz |                                                                                             | 5601.8               | 51.52               | -16.68                  | 68.2                        | 39.6                      | 31.6                          | 10.38                  | 30.06                      | 100                  | 269                     | P                       | V               |
|                                        |                                                                                             | 5686.2               | 52.68               | -42.34                  | 95.02                       | 40.63                     | 31.7                          | 10.47                  | 30.12                      | 100                  | 269                     | P                       | V               |
|                                        |                                                                                             | 5719.6               | 57.97               | -52.72                  | 110.69                      | 45.87                     | 31.74                         | 10.51                  | 30.15                      | 100                  | 269                     | P                       | V               |
|                                        |                                                                                             | 5724                 | 59.67               | -60.25                  | 119.92                      | 47.55                     | 31.75                         | 10.52                  | 30.15                      | 100                  | 269                     | P                       | V               |
|                                        | *                                                                                           | 5775                 | 91.49               | -                       | -                           | 79.31                     | 31.8                          | 10.57                  | 30.19                      | 100                  | 269                     | P                       | V               |
|                                        | *                                                                                           | 5775                 | 83.75               | -                       | -                           | 71.57                     | 31.8                          | 10.57                  | 30.19                      | 100                  | 269                     | A                       | V               |
|                                        |                                                                                             | 5850.575             | 54.43               | -66.46                  | 120.89                      | 42.03                     | 32                            | 10.64                  | 30.24                      | 100                  | 269                     | P                       | V               |
|                                        |                                                                                             | 5858.98              | 55.36               | -54.32                  | 109.68                      | 42.95                     | 32.02                         | 10.64                  | 30.25                      | 100                  | 269                     | P                       | V               |
|                                        |                                                                                             | 5888.705             | 52.05               | -42.98                  | 95.03                       | 39.58                     | 32.08                         | 10.66                  | 30.27                      | 100                  | 269                     | P                       | V               |
|                                        |                                                                                             | 5945.695             | 51.94               | -16.26                  | 68.2                        | 39.36                     | 32.19                         | 10.7                   | 30.31                      | 100                  | 269                     | P                       | V               |
|                                        |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                        |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                        |                                                                                             | 5643                 | 52.06               | -16.14                  | 68.2                        | 40.03                     | 31.69                         | 10.43                  | 30.09                      | 254                  | 292                     | P                       | H               |
|                                        |                                                                                             | 5686.2               | 51.66               | -43.36                  | 95.02                       | 39.61                     | 31.7                          | 10.47                  | 30.12                      | 254                  | 292                     | P                       | H               |
|                                        |                                                                                             | 5720                 | 57.06               | -53.74                  | 110.8                       | 44.96                     | 31.74                         | 10.51                  | 30.15                      | 254                  | 292                     | P                       | H               |
|                                        |                                                                                             | 5724                 | 58.25               | -61.67                  | 119.92                      | 46.13                     | 31.75                         | 10.52                  | 30.15                      | 254                  | 292                     | P                       | H               |
|                                        | *                                                                                           | 5775                 | 90.35               | -                       | -                           | 78.17                     | 31.8                          | 10.57                  | 30.19                      | 254                  | 292                     | P                       | H               |
|                                        | *                                                                                           | 5775                 | 83.23               | -                       | -                           | 71.05                     | 31.8                          | 10.57                  | 30.19                      | 254                  | 292                     | A                       | H               |
|                                        |                                                                                             | 5852.83              | 53.88               | -61.87                  | 115.75                      | 41.47                     | 32.01                         | 10.64                  | 30.24                      | 254                  | 292                     | P                       | H               |
|                                        |                                                                                             | 5857.955             | 55.19               | -54.78                  | 109.97                      | 42.78                     | 32.02                         | 10.64                  | 30.25                      | 254                  | 292                     | P                       | H               |
|                                        |                                                                                             | 5903.055             | 52.18               | -32.22                  | 84.4                        | 39.68                     | 32.11                         | 10.67                  | 30.28                      | 254                  | 292                     | P                       | H               |
|                                        |                                                                                             | 5925.195             | 51.81               | -16.39                  | 68.2                        | 39.27                     | 32.15                         | 10.69                  | 30.3                       | 254                  | 292                     | P                       | H               |
|                                        |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | 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 802.11ac VHT80 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1                                | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11ac<br/>VHT80<br/>CH 155<br/>5775MHz</b> |                                                                                             | 11550                | 49.67               | -24.33                  | 74                          | 55.52                     | 40.05                         | 15.06                  | 60.96                      | 100                  | 0                       | P                       | H               |
|                                                  |                                                                                             | 17325                | 52.39               | -15.81                  | 68.2                        | 51.27                     | 41.28                         | 18.55                  | 58.71                      | 100                  | 0                       | P                       | H               |
|                                                  |                                                                                             | 17989                | 60.15               | -13.85                  | 74                          | 50.23                     | 48.8                          | 19.03                  | 57.91                      | 100                  | 325                     | P                       | H               |
|                                                  |                                                                                             | 17989                | 49.8                | -4.2                    | 54                          | 39.88                     | 48.8                          | 19.03                  | 57.91                      | 100                  | 325                     | A                       | H               |
|                                                  |                                                                                             | 11550                | 48.89               | -25.11                  | 74                          | 54.74                     | 40.05                         | 15.06                  | 60.96                      | 100                  | 0                       | P                       | V               |
|                                                  |                                                                                             | 17325                | 51.92               | -16.28                  | 68.2                        | 50.8                      | 41.28                         | 18.55                  | 58.71                      | 100                  | 0                       | P                       | V               |
|                                                  |                                                                                             | 17989                | 60.45               | -13.55                  | 74                          | 50.53                     | 48.8                          | 19.03                  | 57.91                      | 100                  | 33                      | P                       | V               |
|                                                  |                                                                                             | 17989                | 49.34               | -4.66                   | 54                          | 39.42                     | 48.8                          | 19.03                  | 57.91                      | 100                  | 33                      | A                       | V               |
| <b>Remark</b>                                    | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



Emission above 18GHz  
5GHz WIFI 802.11ac VHT80 (SHF)

| WIFI<br>Ant.<br>1                | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|----------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 5GHz<br>802.11ac<br>VHT80<br>SHF |                                                                            | 22616                | 40.04               | -33.96                  | 74                          | 43.13                   | 38.98                         | 12.34                  | 54.41                      | 150                  | 0                       | P                     | H             |
|                                  |                                                                            | 34036                | 43                  | -25.2                   | 68.2                        | 41.24                   | 41.76                         | 17.94                  | 57.94                      | 150                  | 0                       | P                     | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                  |                                                                            | 22280                | 40.14               | -33.86                  | 74                          | 43.7                    | 38.79                         | 12.24                  | 54.59                      | 150                  | 0                       | P                     | V             |
|                                  |                                                                            | 33406                | 42.76               | -25.44                  | 68.2                        | 41.15                   | 41.06                         | 17.81                  | 57.26                      | 150                  | 0                       | P                     | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                  |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| Remark                           | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |



**Emission below 1GHz**  
**5GHz WIFI 802.11ac VHT80 (LF)**

| WIFI<br>Ant.<br>1                         | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| <b>5GHz<br/>802.11ac<br/>VHT80<br/>LF</b> |                                                                            | 67.83                | 33.93               | -6.07                   | 40                          | 52.8                    | 12.54                         | 1.13                   | 32.54                      | -                    | -                       | P                     | H             |
|                                           |                                                                            | 94.99                | 35.57               | -7.93                   | 43.5                        | 51.15                   | 15.52                         | 1.38                   | 32.48                      | -                    | -                       | P                     | H             |
|                                           |                                                                            | 176.47               | 38.91               | -4.59                   | 43.5                        | 54.08                   | 15.39                         | 1.92                   | 32.48                      | 165                  | 247                     | Q                     | H             |
|                                           |                                                                            | 203.63               | 40.41               | -3.09                   | 43.5                        | 55.83                   | 14.95                         | 2.07                   | 32.44                      | 100                  | 15                      | Q                     | H             |
|                                           |                                                                            | 325.85               | 42.46               | -3.54                   | 46                          | 52.95                   | 19.55                         | 2.48                   | 32.52                      | 204                  | 14                      | Q                     | H             |
|                                           |                                                                            | 555.74               | 35.82               | -10.18                  | 46                          | 39.66                   | 25.55                         | 3.23                   | 32.62                      | -                    | -                       | P                     | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                           |                                                                            | 40.67                | 35.56               | -4.44                   | 40                          | 48.19                   | 19.11                         | 0.82                   | 32.56                      | 100                  | 275                     | Q                     | V             |
|                                           |                                                                            | 94.99                | 37.13               | -6.37                   | 43.5                        | 52.71                   | 15.52                         | 1.38                   | 32.48                      | -                    | -                       | P                     | V             |
|                                           |                                                                            | 203.63               | 35.65               | -7.85                   | 43.5                        | 51.07                   | 14.95                         | 2.07                   | 32.44                      | -                    | -                       | P                     | V             |
|                                           |                                                                            | 339.43               | 36.07               | -9.93                   | 46                          | 46.12                   | 19.96                         | 2.52                   | 32.53                      | -                    | -                       | P                     | V             |
|                                           |                                                                            | 447.1                | 34.11               | -11.89                  | 46                          | 40.84                   | 22.84                         | 2.84                   | 32.41                      | -                    | -                       | P                     | V             |
|                                           |                                                                            | 555.74               | 30.88               | -15.12                  | 46                          | 34.72                   | 25.55                         | 3.23                   | 32.62                      | -                    | -                       | P                     | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                           |                                                                            |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| <b>Remark</b>                             | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |



**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>over limit</b> line.                                                                                                                   |
| P/A | <b>Peak</b> or <b>Average</b>                                                                                                                            |
| H/V | <b>H</b> orizontal or <b>V</b> ertical                                                                                                                   |



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

| WIFI    | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|---------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.    |      |           |            | Limit  | 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 ) |
| 802.11b |      | 2390      | 55.45      | -18.55 | 74         | 54.51    | 32.22    | 4.58   | 35.86  | 103    | 308     | P       | H       |
| CH 01   |      |           |            |        |            |          |          |        |        |        |         |         |         |
| 2412MHz |      | 2390      | 43.54      | -10.46 | 54         | 42.6     | 32.22    | 4.58   | 35.86  | 103    | 308     | A       | H       |

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. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)  
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
 = 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)  
 = 55.45 (dBμV/m)
2. Over Limit(dB)  
 = Level(dBμV/m) – Limit Line(dBμV/m)  
 = 55.45(dBμV/m) – 74(dBμV/m)  
 = -18.55(dB)

**For Average Limit @ 2390MHz:**

1. Level(dBμV/m)  
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
 = 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)  
 = 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)  
 = 43.54(dBμV/m) – 54(dBμV/m)  
 = -10.46(dB)

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

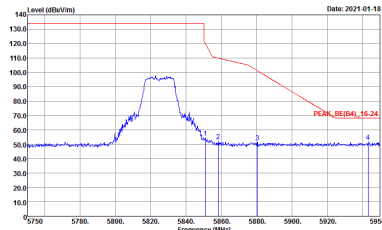
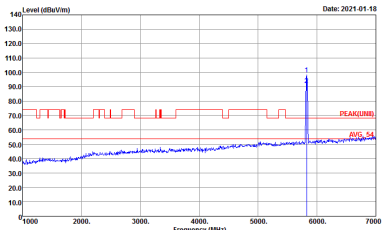


## Appendix D. Radiated Spurious Emission Plots

|                 |                                       |                     |               |
|-----------------|---------------------------------------|---------------------|---------------|
| Test Engineer : | Leo Lee, Mancy Chou, and Bigshow Wang | Temperature :       | 22.1 ~ 23.1°C |
|                 |                                       | Relative Humidity : | 55 ~ 60%      |

&lt;Sample 1&gt;

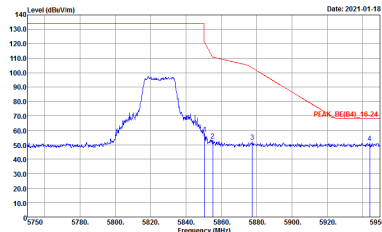
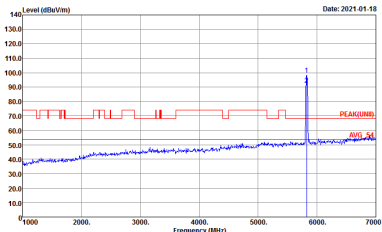
**Band 4 - 5725~5850MHz**  
**WIFI 802.11a (Band Edge @ 3m)**

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                      |                                                                                                                                                                                                                   |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH165 5825MHz                                                                                                                                                                                                   |                                                                                                                                                                                                                   |
| 1    | Horizontal                                                                                                                                                                                                              | Fundamental                                                                                                                                                                                                       |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNII) 3m 91200_15_1620 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
|      |                                                                                                                                                                                                                         |                                                                                                                                                                                                                   |

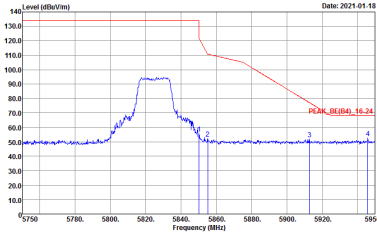
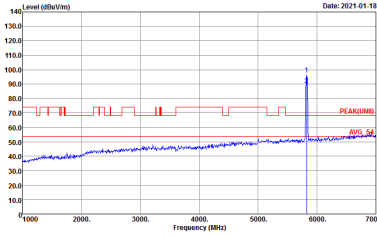


| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                      |                                                                                                                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH165 5825MHz                                                                                                                                                                   |                                                                                                                                                                                         |
| 1    | Vertical                                                                                                                                                                                | Fundamental                                                                                                                                                                             |
| Peak | <div><p>Level (dBuV/m)</p><p>Date: 2021-01-18</p><p>Site : 03CH15-HY<br/>Condition : PEAK_95(B4)_16-24 3m 91200_15_1620 VERTICAL<br/>RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2021-01-18</p><p>Site : 03CH15-HY<br/>Condition : PEAK_95(B4)_16-24 3m 91200_15_1620 VERTICAL<br/>RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p></div> |

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

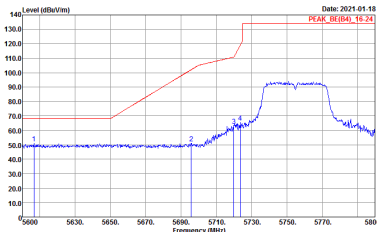
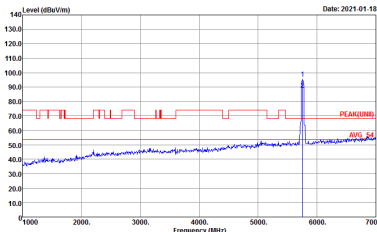
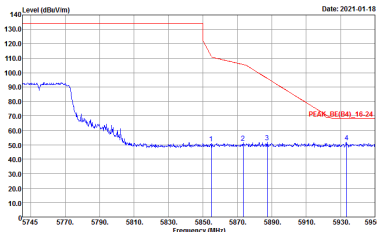
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                       |                                                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH165 5825MHz                                                                                                                                                                                               |                                                                                                                                                                                                                           |
| 1    | Horizontal                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                               |
| Peak |  <p>Site : 03CH15-HY<br/> Condition : PEAK_05(04)_16-24 3m 91200_15_1620 HORIZONTAL<br/> : RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/> Condition : PEAK_05(04)_16-24 3m 91200_15_1620 HORIZONTAL<br/> : RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p> |



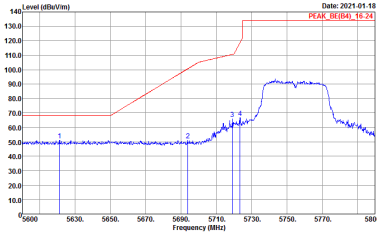
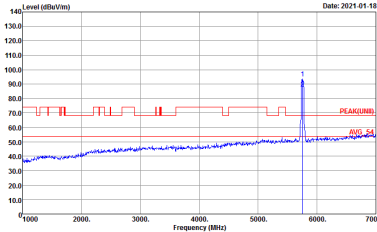
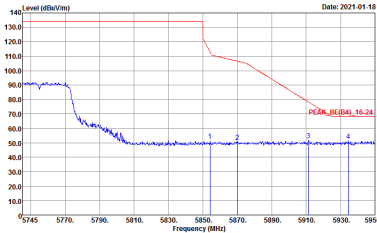
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                 |                                                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH165 5825MHz                                                                                                                                                                                         |                                                                                                                                                                                                                     |
| 1    | Vertical                                                                                                                                                                                                           | Fundamental                                                                                                                                                                                                         |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_95(B4)_16-24 3m 91200_15_1620 VERTICAL<br/>RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK_95(B4)_16-24 3m 91200_15_1620 VERTICAL<br/>RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p> |



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

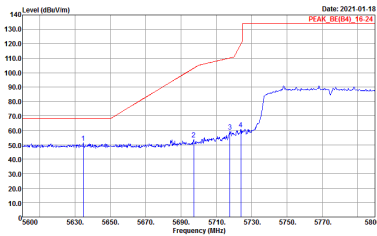
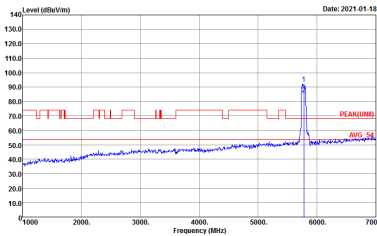
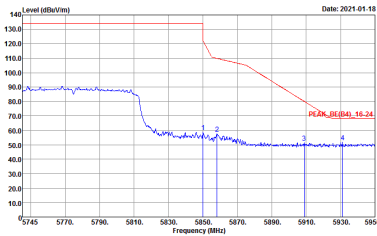
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                     |                                                                                                                                                                                                                |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH151 5755MHz                                                                                                                                                                                             |                                                                                                                                                                                                                |
| 1    | Horizontal                                                                                                                                                                                                             | Fundamental                                                                                                                                                                                                    |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL<br/>RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p>   |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL<br/>RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p> |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL<br/>RBW:1000.000KHz VSW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                     |



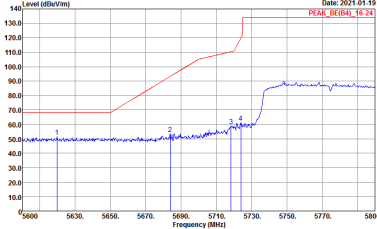
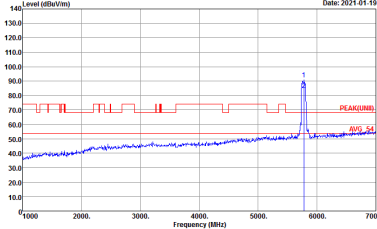
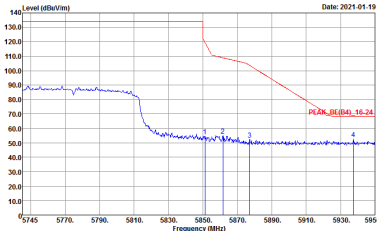
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                     |                                                                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH151 5755MHz                                                                                                                                                                                             |                                                                                                                                                                                                                 |
| 1    | Vertical                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                     |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>   |  <p>Site : 03CH15-HY<br/>Condition : PEAK(FUND)_15m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
|      |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                      |



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

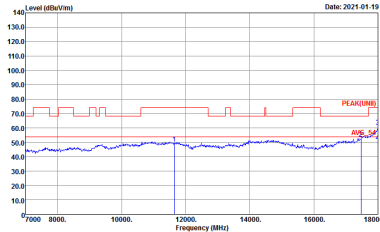
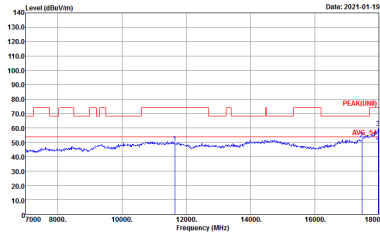
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                       |                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ac VHT80 CH155 5775MHz                                                                                                                                                                                             |                                                                                                                                                                                                                         |
| 1    | Horizontal                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                             |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>   |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 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 : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>   |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                            |

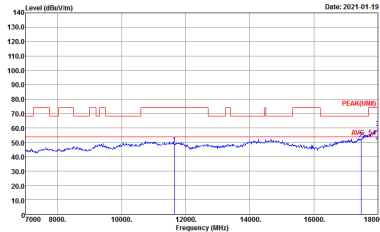
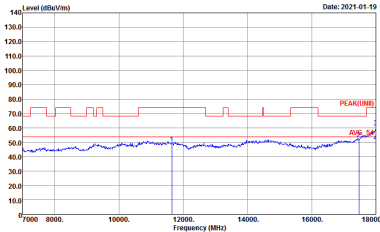


Band 4 - 5725~5850MHz  
WIFI 802.11a (Harmonic @ 3m)

| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                |                                                                                                                                                                 |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH165 5825MHz                                                                                                                                            |                                                                                                                                                                 |
| 1            | Horizontal                                                                                                                                                       | Vertical                                                                                                                                                        |
| Peak<br>Avg. |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL</p> |



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

| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                          |                                                                                                                                                                           |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH165 5825MHz                                                                                                                                                 |                                                                                                                                                                           |
| 1            | Horizontal                                                                                                                                                                 | Vertical                                                                                                                                                                  |
| Peak<br>Avg. | <div><p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL</p></div> | <div><p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL</p></div> |

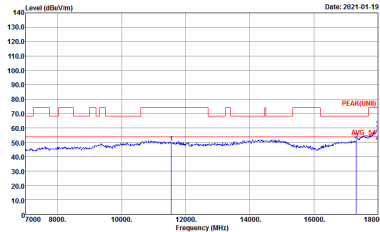
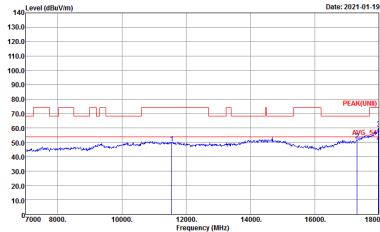


Band 4 5725~5850MHz  
WIFI 802.11n HT40 (Harmonic @ 3m)

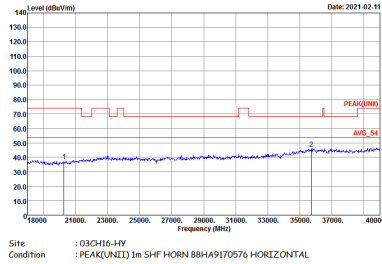
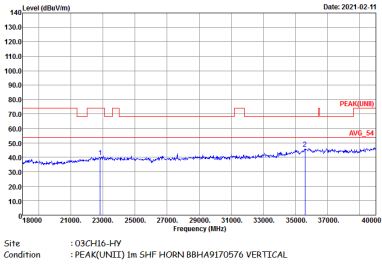
| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                              |                                                                              |
|--------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH151 5755MHz                                                     |                                                                              |
| 1            | Horizontal                                                                     | Vertical                                                                     |
| Peak<br>Avg. | <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL</p> | <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL</p> |



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

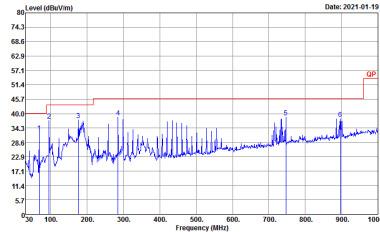
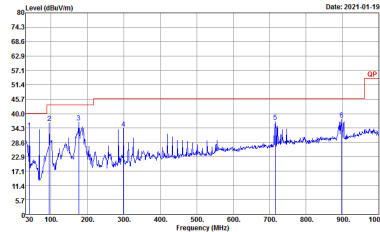
| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                |                                                                                                                                                                 |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11ac VHT80 CH155 5775MHz                                                                                                                                     |                                                                                                                                                                 |
| 1            | Horizontal                                                                                                                                                       | Vertical                                                                                                                                                        |
| Peak<br>Avg. |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL</p> |

**Emission above 18GHz  
5GHz WIFI 802.11ac VHT80 (SHF)**

| WIFI                 | 5GHz WIFI                                                                                                                                                               |                                                                                                                                                                        |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT                  | 802.11ac VHT80 SHF                                                                                                                                                      |                                                                                                                                                                        |
| 1                    | Horizontal                                                                                                                                                              | Vertical                                                                                                                                                               |
| <b>QP /<br/>Peak</b> |  <p>Site : 03CH16-HY<br/>Condition : PEAK(UNIT) 1m SHF HORN 88HA9170576 HORIZONTAL</p> |  <p>Site : 03CH16-HY<br/>Condition : PEAK(UNIT) 1m SHF HORN 88HA9170576 VERTICAL</p> |
|                      |                                                                                                                                                                         |                                                                                                                                                                        |



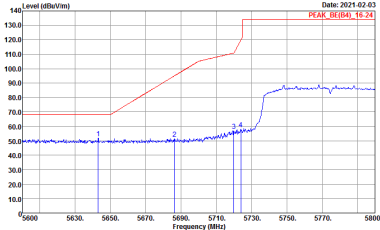
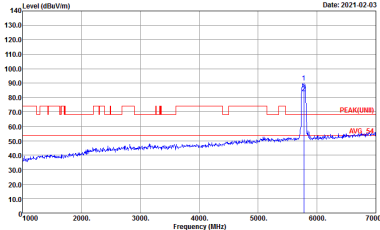
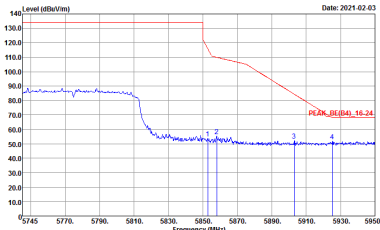
Emission below 1GHz  
5GHz WIFI 802.11ac VHT80 (LF)

| WIFI         | 5GHz WIFI                                                                                                                                                 |                                                                                                                                                          |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11ac VHT80 LF                                                                                                                                         |                                                                                                                                                          |
| 1            | Horizontal                                                                                                                                                | Vertical                                                                                                                                                 |
| QP /<br>Peak |  <p>Site : 03CH15-HY<br/>Condition : QP 3m 81LOG_15_41912 HORIZONTAL</p> |  <p>Site : 03CH15-HY<br/>Condition : QP 3m 81LOG_15_41912 VERTICAL</p> |
|              |                                                                                                                                                           |                                                                                                                                                          |

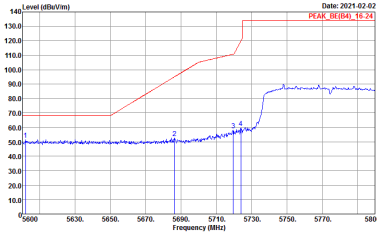
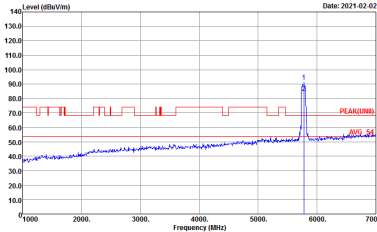
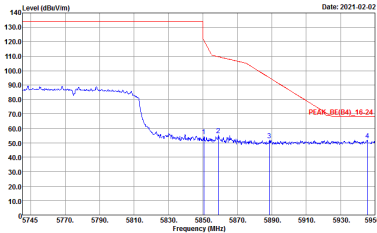


&lt;Sample 2&gt;

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

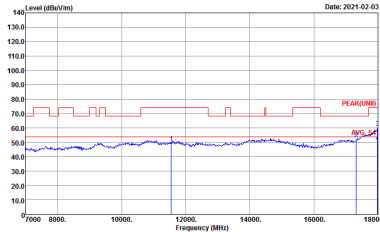
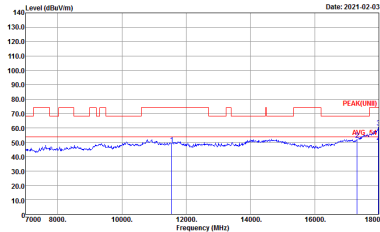
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                       |                                                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ac VHT80 CH155 5775MHz                                                                                                                                                                                             |                                                                                                                                                                                                                           |
| 1    | Horizontal                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                               |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(04)_16-24 3m 91200_15_1620 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>   |  <p>Site : 03CH15-HY<br/>Condition : PEAK_FUND(04)_16-24 3m 91200_15_1620 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(04)_16-24 3m 91200_15_1620 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                                |



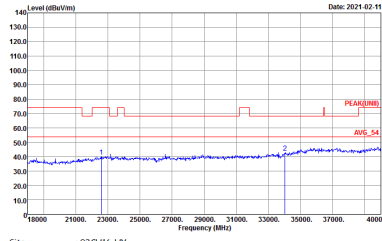
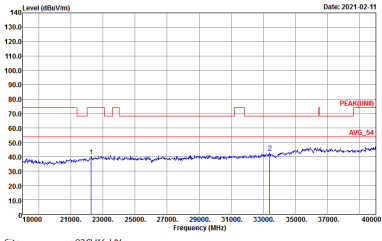
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                     |                                                                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ac VHT80 CH155 5775MHz                                                                                                                                                                                           |                                                                                                                                                                                                                 |
| 1    | Vertical                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                     |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>   |  <p>Site : 03CH15-HY<br/>Condition : PEAK(FUND)_15m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
|      |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                      |



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

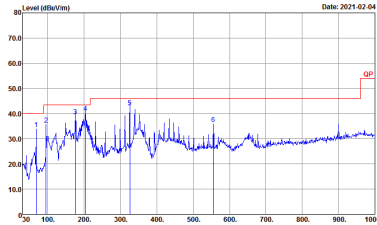
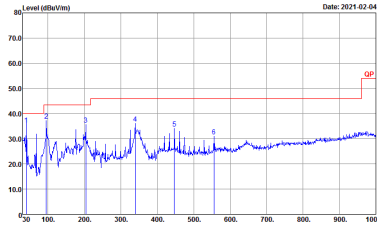
| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                |                                                                                                                                                                 |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11ac VHT80 CH155 5775MHz                                                                                                                                     |                                                                                                                                                                 |
| 1            | Horizontal                                                                                                                                                       | Vertical                                                                                                                                                        |
| Peak<br>Avg. |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL</p> |

**Emission above 18GHz  
5GHz WIFI 802.11ac VHT80 (SHF)**

| WIFI                 | 5GHz WIFI                                                                                                                                                               |                                                                                                                                                                        |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT                  | 802.11ac VHT80 SHF                                                                                                                                                      |                                                                                                                                                                        |
| 1                    | Horizontal                                                                                                                                                              | Vertical                                                                                                                                                               |
| <b>QP /<br/>Peak</b> |  <p>Site : 03CH16-HY<br/>Condition : PEAK(UNIT) 1m SHF HORN 88HA9170576 HORIZONTAL</p> |  <p>Site : 03CH16-HY<br/>Condition : PEAK(UNIT) 1m SHF HORN 88HA9170576 VERTICAL</p> |
|                      |                                                                                                                                                                         |                                                                                                                                                                        |



Emission below 1GHz  
5GHz WIFI 802.11ac VHT80 (LF)

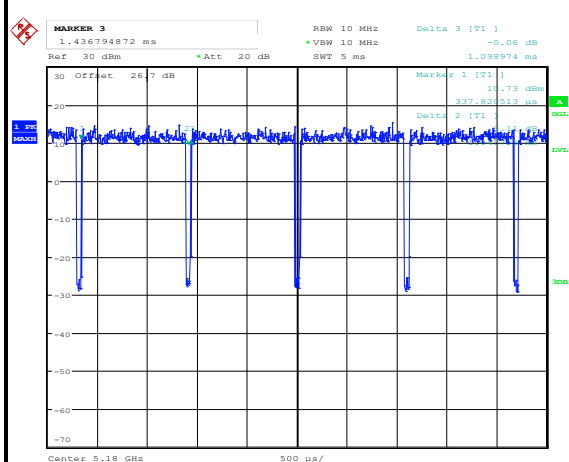
| WIFI         | 5GHz WIFI                                                                                                                                                 |                                                                                                                                                          |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11ac VHT80 LF                                                                                                                                         |                                                                                                                                                          |
| 1            | Horizontal                                                                                                                                                | Vertical                                                                                                                                                 |
| QP /<br>Peak |  <p>Site : 03CH15-HY<br/>Condition : QP 3m 81LOG_15_41912 HORIZONTAL</p> |  <p>Site : 03CH15-HY<br/>Condition : QP 3m 81LOG_15_41912 VERTICAL</p> |
|              |                                                                                                                                                           |                                                                                                                                                          |



## Appendix E. Duty Cycle Plots

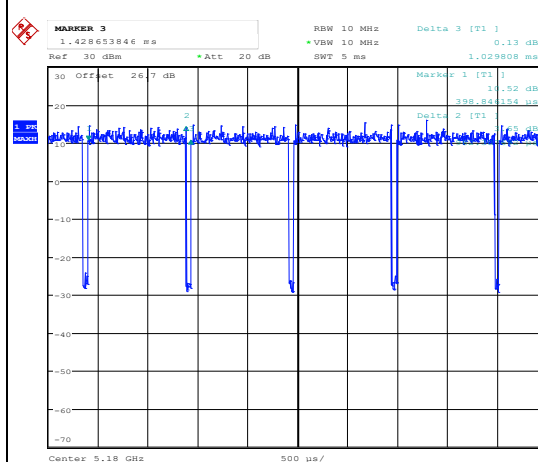
| Band                | Duty Cycle (%) | T(us)   | 1/T(kHz) | VBW Setting | Duty Factor (dB) |
|---------------------|----------------|---------|----------|-------------|------------------|
| 802.11a             | 95.15          | 1045.71 | 0.96     | 1kHz        | 0.22             |
| 5GHz 802.11n HT20   | 95.39          | 982.31  | 1.02     | 3kHz        | 0.20             |
| 5GHz 802.11n HT40   | 90.25          | 486.54  | 2.06     | 3kHz        | 0.45             |
| 5GHz 802.11ac VHT80 | 90.22          | 246.95  | 4.05     | 10kHz       | 0.45             |

802.11a



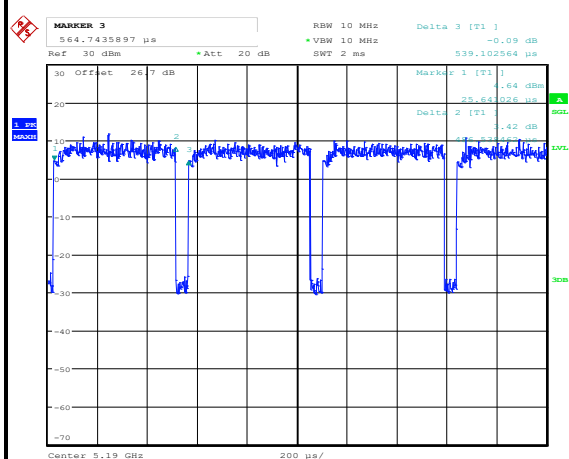
Date: 30.DEC.2020 05:29:48

802.11n HT20



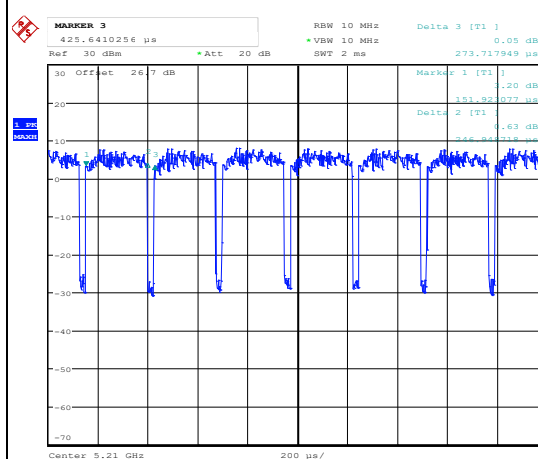
Date: 30.DEC.2020 05:25:05

802.11n HT40



Date: 30.DEC.2020 05:36:31

802.11ac VHT80



Date: 30.DEC.2020 05:41:15