



# FCC RF Test Report

**APPLICANT** : Motorola Mobility LLC  
**EQUIPMENT** : Mobile Cellular Phone  
**BRAND NAME** : Motorola  
**MODEL NAME** : XT1921-6, XT1921-1  
**FCC ID** : IHDT56XC1  
**STANDARD** : FCC Part 15 Subpart E §15.407  
**CLASSIFICATION** : (NII) Unlicensed National Information Infrastructure

The product was received on Dec. 20, 2017 and testing was completed on Jan. 21, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

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Reviewed by: Joseph Lin / Supervisor

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Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

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FCC ID: IHDT56XC1

Page Number : 1 of 28

Report Issued Date : Feb. 22, 2018

Report Version : Rev. 01

Report Template No.: BU5-FR15EWLB4 AC MA Version 1.4



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## REVISION HISTORY

| REPORT NO.   | VERSION | DESCRIPTION             | ISSUED DATE   |
|--------------|---------|-------------------------|---------------|
| FR7D2018-03E | Rev. 01 | Initial issue of report | Feb. 22, 2018 |
|              |         |                         |               |
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|              |         |                         |               |



## SUMMARY OF TEST RESULT

| Report Section | FCC Rule           | Description                            | Limit                       | Result | Remark                                   |
|----------------|--------------------|----------------------------------------|-----------------------------|--------|------------------------------------------|
| 3.1            | 15.403(i)          | 6dB, 26dB and 99% Occupied Bandwidth   | > 500kHz                    | Pass   | -                                        |
| 3.2            | 15.407(a)          | Maximum Conducted Output Power         | ≤ 30 dBm                    | Pass   | -                                        |
| 3.3            | 15.407(a)          | Power Spectral Density                 | ≤ 30 dBm/500kHz             | Pass   | -                                        |
| 3.4            | 15.407(b)          | Unwanted Emissions                     | 15.407(b)(4)(i) & 15.209(a) | Pass   | Under limit<br>12.21 dB at<br>36.750 MHz |
| 3.5            | 15.207             | AC Conducted Emission                  | 15.207(a)                   | Pass   | Under limit<br>17.70 dB at<br>0.150 MHz  |
| 3.6            | 15.407(c)          | Automatically Discontinue Transmission | Discontinue Transmission    | Pass   | -                                        |
| 3.7            | 15.203 & 15.407(a) | Antenna Requirement                    | N/A                         | Pass   | -                                        |



# 1 General Description

## 1.1 Applicant

Motorola Mobility LLC

222 W. Merchandise Mart Plaza, Chicago IL 60654, USA

## 1.2 Manufacturer

Motorola Mobility LLC

222 W. Merchandise Mart Plaza, Chicago IL 60654, USA

## 1.3 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Equipment                       | Mobile Cellular Phone                                                                                           |
| Brand Name                      | Motorola                                                                                                        |
| Model Name                      | XT1921-6, XT1921-1                                                                                              |
| FCC ID                          | IHDT56XC1                                                                                                       |
| IMEI Code                       | 351838090014406 (for Radiation)<br>351838090015015 (for Conduction)                                             |
| EUT supports Radios application | CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/FM/GNSS<br>WLAN 11b/g/n HT20<br>WLAN 11a/n HT20/HT40<br>Bluetooth BR/EDR/LE |
| HW Version                      | DVT1B                                                                                                           |
| EUT Stage                       | Identical Prototype                                                                                             |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

| Accessory List |                                          |
|----------------|------------------------------------------|
| AC Adapter 1   | Brand Name : Motorola                    |
|                | Model Name : C-P35                       |
| AC Adapter 2   | Brand Name : Motorola                    |
|                | Model Name : SSW-2919UMTJ C-P35 SPN5945A |
| AC Adapter 3   | Brand Name : Motorola                    |
|                | Model Name : C-P56                       |
| AC Adapter 4   | Brand Name : Motorola                    |
|                | Model Name : C-P56                       |
| Battery        | Brand Name : Motorola                    |
|                | Model Name : GK40                        |
| USB Cable      | Brand Name : Saibao                      |
|                | Model Name : SWT-A083A                   |



## 1.4 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                                            |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Tx/Rx Channel Frequency Range</b>    | 5745 MHz ~ 5825 MHz                                                                                        |
| <b>Maximum Output Power</b>             | 802.11a : 15.99 dBm / 0.0397 W<br>802.11n HT20 : 9.98 dBm / 0.0100 W<br>802.11n HT40 : 9.99 dBm / 0.0100 W |
| <b>99% Occupied Bandwidth</b>           | 802.11a : 20.75 MHz<br>802.11n HT20 : 19.25 MHz<br>802.11n HT40 : 36.80 MHz                                |
| <b>Antenna Type / Gain</b>              | PIFA Antenna with gain -3.59 dBi                                                                           |
| <b>Type of Modulation</b>               | 802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)                                                             |

## 1.5 Modification of EUT

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

## 1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

|                           |                                                                                                                                                                  |         |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <b>Test Site</b>          | SPORTON INTERNATIONAL INC.                                                                                                                                       |         |
| <b>Test Site Location</b> | No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park,<br>Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |         |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                          |         |
|                           | TH05-HY                                                                                                                                                          | CO05-HY |

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

|                           |                                                                                                                                        |  |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Test Site</b>          | SPORTON INTERNATIONAL INC.                                                                                                             |  |
| <b>Test Site Location</b> | 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 |  |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                |  |
|                           | 03CH10-HY                                                                                                                              |  |

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

## 1.7 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.
- ♦ 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. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

## 2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y 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.<br>(MHz) | Channel | Freq.<br>(MHz) |
|--------------------------------------|---------|----------------|---------|----------------|
| 5725-5850 MHz<br>Band 4<br>(U-NII-3) | 149     | 5745           | 157     | 5785           |
|                                      | 151*    | 5755           | 159*    | 5795           |
|                                      | 153     | 5765           | 161     | 5805           |
|                                      | -       | -              | 165     | 5825           |

**Note:** The above Frequency and Channel in "\*" were 802.11n HT40.



## 2.2 Test Mode

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

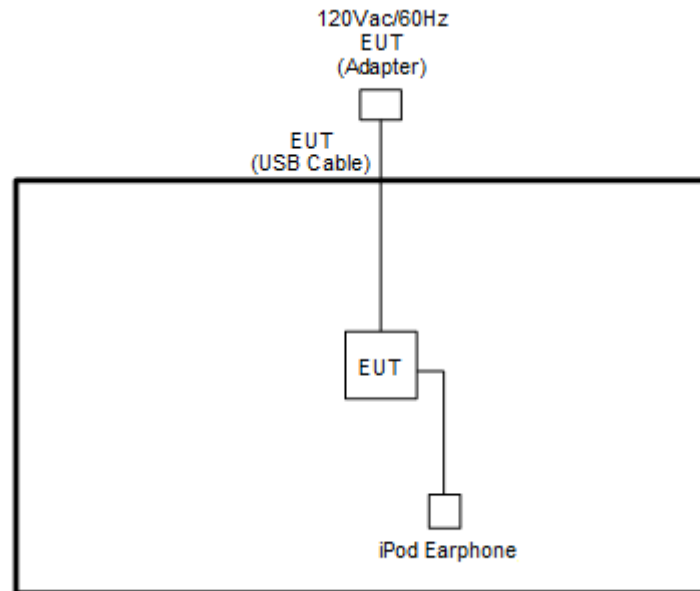
| Modulation   | Data Rate |
|--------------|-----------|
| 802.11a      | 6 Mbps    |
| 802.11n HT20 | MCS0      |
| 802.11n HT40 | MCS0      |

|                                                                                  |                                                                                                                             |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>AC<br/>Conducted<br/>Emission</b>                                             | Mode 1 : GSM 1900 Idle + Bluetooth Link + WLAN (5GHz) Link + SD Card + MP3 + Earphone + USB Cable (Charging from Adapter 1) |
| <b>Remark:</b> For Radiated Test Cases, The tests were performed with Adapter 1. |                                                                                                                             |

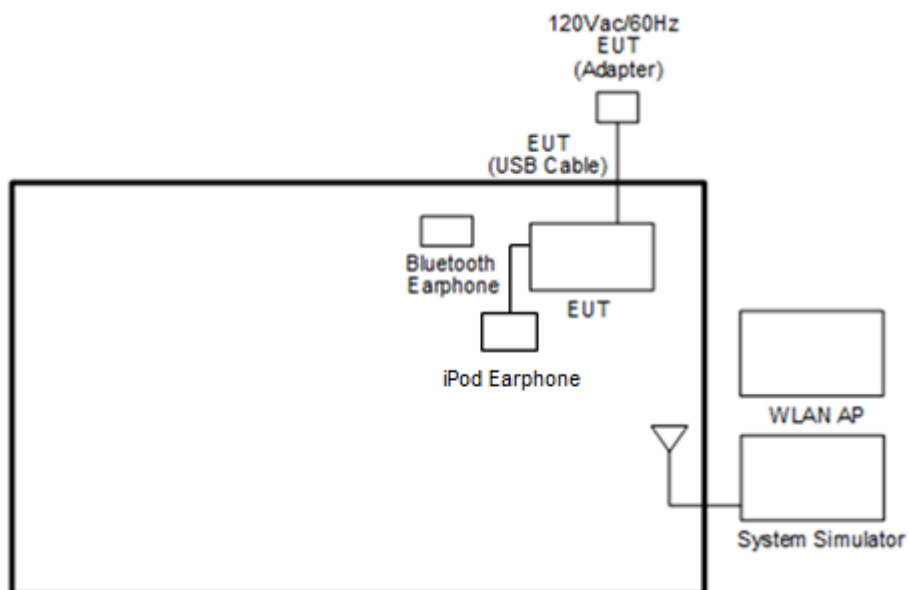
| Ch. # |        | Band IV : 5725-5850 MHz |              |              |
|-------|--------|-------------------------|--------------|--------------|
|       |        | 802.11a                 | 802.11n HT20 | 802.11n HT40 |
| L     | Low    | 149                     | 149          | 151          |
|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

## 2.3 Connection Diagram of Test System

### <WLAN Tx Mode>



### <AC Conducted Emission Mode>



## 2.4 Support Unit used in test configuration and system

| Item | Equipment          | Trade Name | Model Name | FCC ID       | Data Cable        | Power Cord        |
|------|--------------------|------------|------------|--------------|-------------------|-------------------|
| 1.   | System Simulator   | Anritsu    | MT8820C    | N/A          | N/A               | Unshielded, 1.8 m |
| 2.   | WLAN AP            | ASUS       | RT-AC66U   | MSQ-RTAC66U  | N/A               | Unshielded, 1.8 m |
| 3.   | iPod Earphone      | Apple      | N/A        | Verification | Unshielded, 1.0 m | N/A               |
| 4.   | Bluetooth Earphone | Lenovo     | LBH 301    | FCC DoC      | N/A               | N/A               |
| 5.   | SD Card            | SanDisk    | MicroSD HC | FCC DoC      | N/A               | N/A               |

## 2.5 EUT Operation Test Setup

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

## 2.6 Measurement Results Explanation Example

**For all conducted test items:**

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

Example :

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

*Offset = RF cable loss + attenuator factor.*

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

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

### 3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

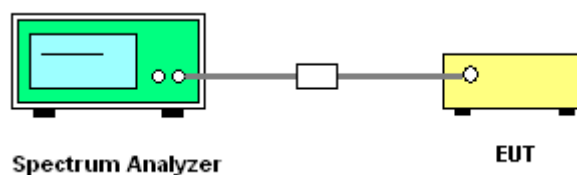
##### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

##### 3.1.3 Test Procedures

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

##### 3.1.4 Test Setup

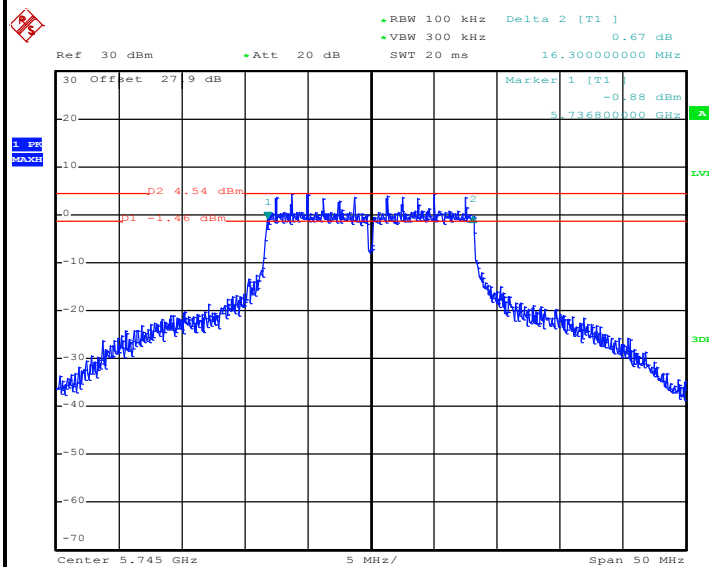


##### 3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.

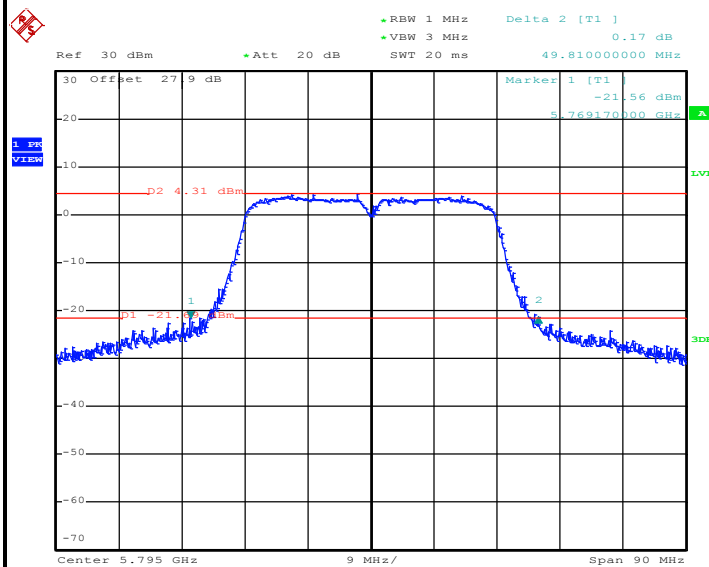


### Minimum 6dB Bandwidth

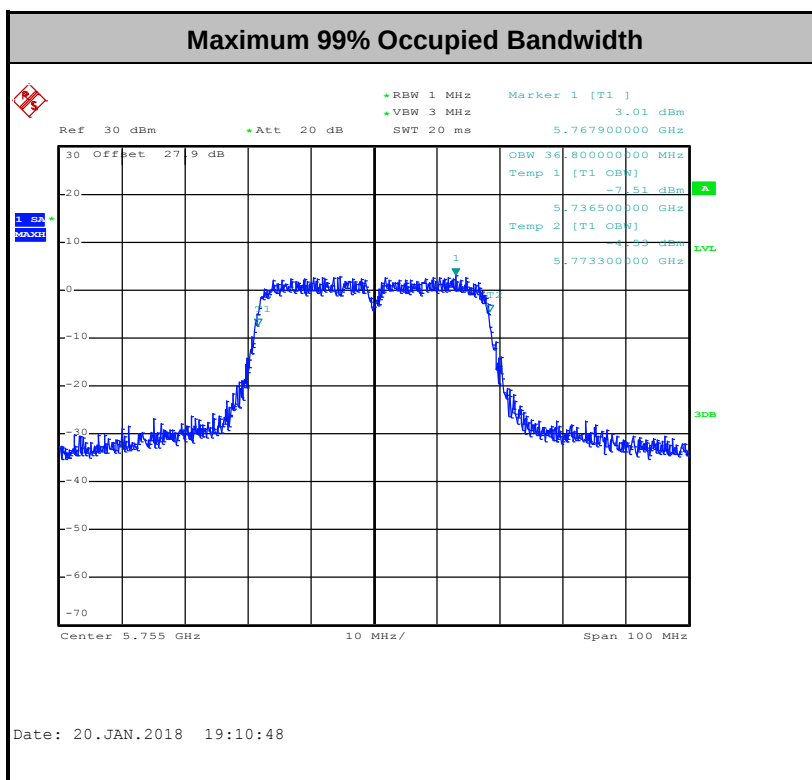


Date: 20.JAN.2018 19:33:06

### Maximum 26dB Bandwidth



Date: 20.JAN.2018 19:13:32



**Note:** The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

## 3.2 Maximum Conducted Output Power Measurement

### 3.2.1 Limit of Maximum Conducted Output Power

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

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

### 3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

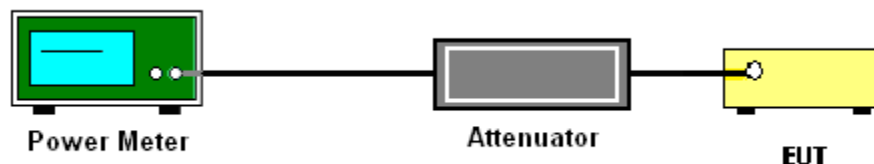
### 3.2.3 Test Procedures

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

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor,  $10 \log(1/x)$ , where  $x$  is the duty cycle.

### 3.2.4 Test Setup



### 3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



### 3.3 Power Spectral Density Measurement

#### 3.3.1 Limit of Power Spectral Density

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

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

#### 3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.3.3 Test Procedures

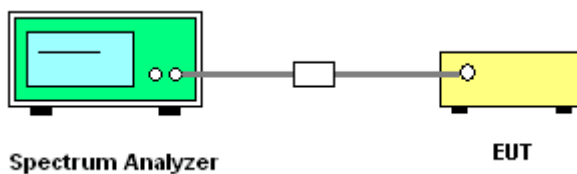
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.  
Section F) Maximum power spectral density.

##### # Method SA-2 #

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

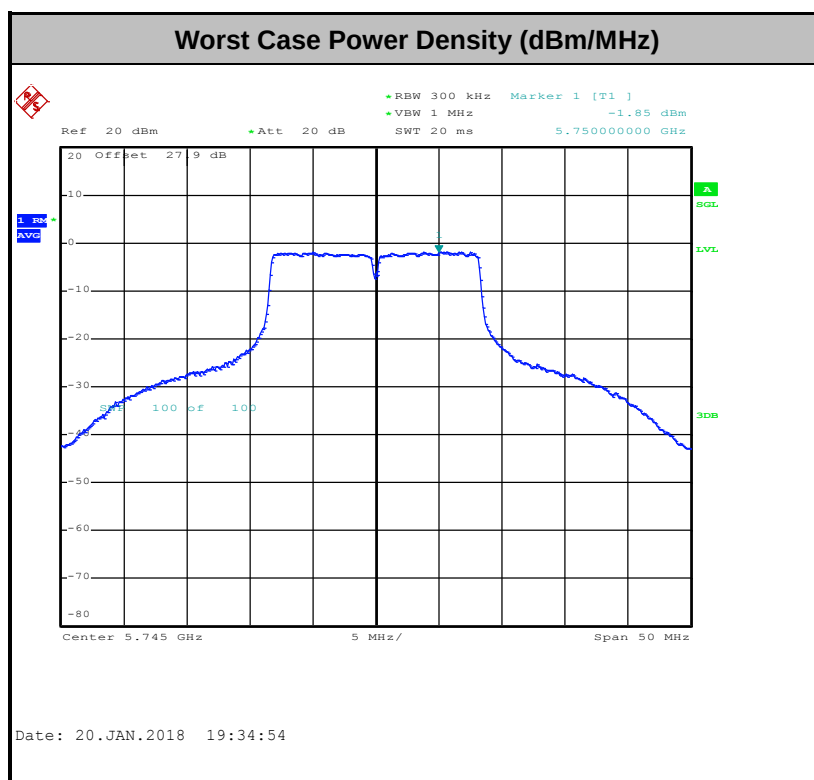
- Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 300 kHz.
  - Set VBW  $\geq$  1 MHz.
  - Number of points in sweep  $\geq$  2 Span / RBW.
  - Sweep time = auto.
  - Detector = RMS
  - Trace average at least 100 traces in power averaging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

### 3.3.4 Test Setup



### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



### 3.4 Unwanted Emissions Measurement

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

#### 3.4.1 Limit of Unwanted Emissions

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

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

- (2) Unwanted spurious emissions 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) |
|------------|-------------------------------|
| -17        | 78.3                          |
| - 27       | 68.3                          |

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

- (i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits 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.<sup>3</sup>
- (ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.<sup>4</sup>

**Note 3:** An out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit.

**Note 4:** Only devices with antenna gains of 10 dBi or less may be approved using the emission limits specified in Section 15.247(d) till March 2, 2018; all other devices operating in this band must use the mask specified in Section 15.407(b)(4)(i).

### 3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

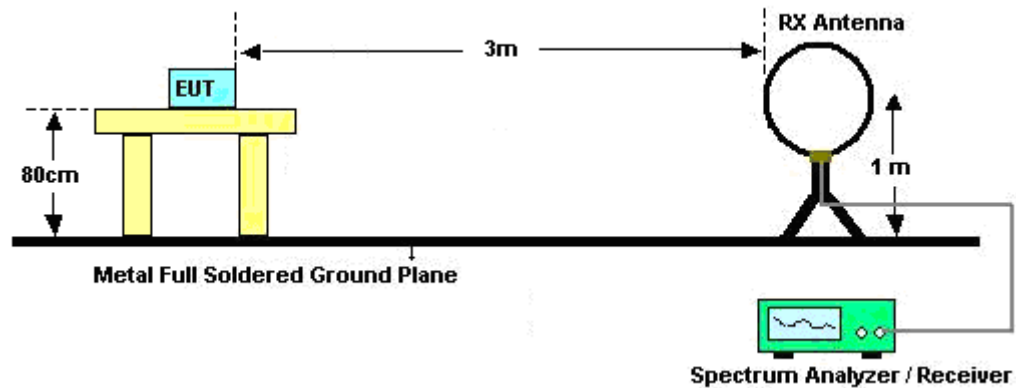
### 3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.  
Section G) Unwanted emissions measurement.
  - (1) Procedure for Unwanted Emissions Measurements Below 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.

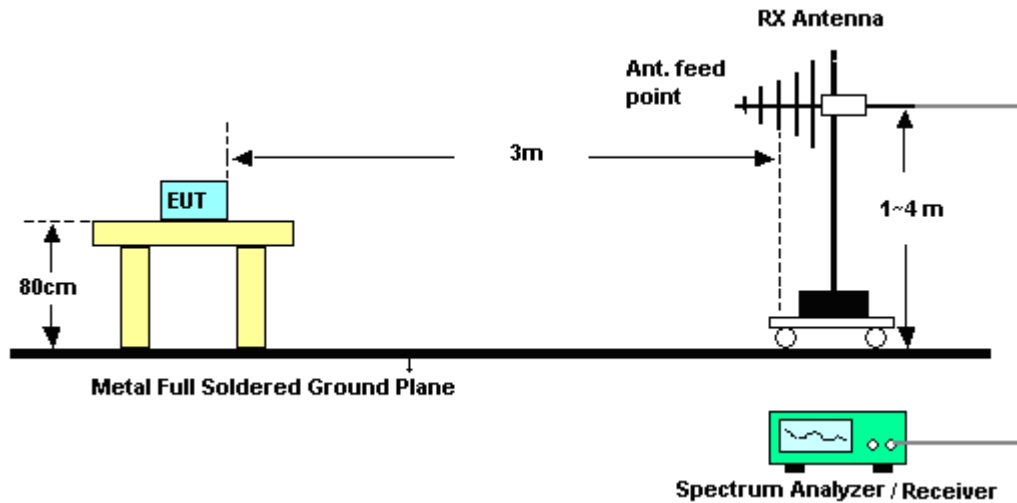
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 3.4.4 Test Setup

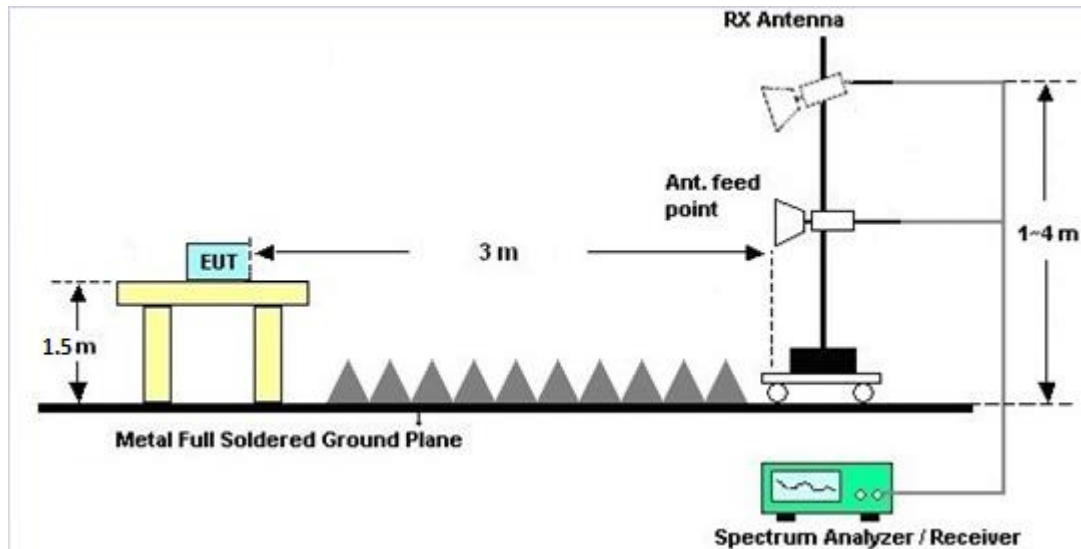
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



### 3.4.5 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 semi-Anechoic chamber, and the result came out very similar.

### 3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

### 3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

## 3.5 AC Conducted Emission Measurement

### 3.5.1 Limit of AC Conducted Emission

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

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

\*Decreases with the logarithm of the frequency.

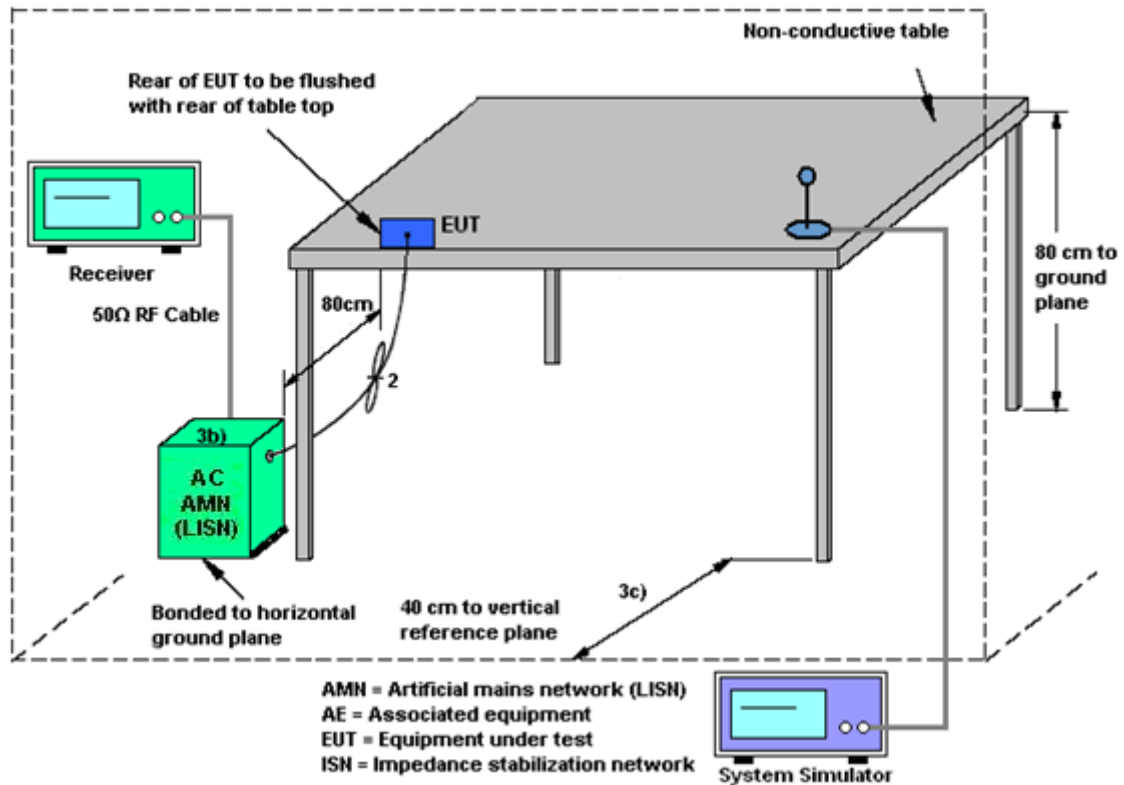
### 3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.5.3 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.

### 3.5.4 Test Setup



### 3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



## **3.6 Automatically Discontinue Transmission**

### **3.6.1 Limit of Automatically Discontinue Transmission**

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

### **3.6.2 Measuring Instruments**

The measuring equipment is listed in the section 4 of this test report.

### **3.6.3 Test Result of Automatically Discontinue Transmission**

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.



## **3.7 Antenna Requirements**

### **3.7.1 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.

### **3.7.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **3.7.3 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           | Manufacturer    | Model No.               | Serial No.         | Characteristics                     | Calibration Date | Test Date                       | Due Date      | Remark                   |
|----------------------|-----------------|-------------------------|--------------------|-------------------------------------|------------------|---------------------------------|---------------|--------------------------|
| Power Meter          | Anritsu         | ML2495A                 | 1240001            | N/A                                 | Sep. 07, 2017    | Jan. 04, 2018~<br>Jan. 20, 2018 | Sep. 06, 2018 | Conducted<br>(TH05-HY)   |
| Power Sensor         | Anritsu         | MA2411B                 | 1207349            | 300MHz~40GHz                        | Sep. 07, 2017    | Jan. 04, 2018~<br>Jan. 20, 2018 | Sep. 06, 2018 | Conducted<br>(TH05-HY)   |
| Spectrum Analyzer    | Rohde & Schwarz | FSP40                   | 100055             | 9kHz~40GHz                          | Jun. 20, 2017    | Jan. 04, 2018~<br>Jan. 20, 2018 | Jun. 19, 2018 | Conducted<br>(TH02-HY)   |
| AC Power Source      | ChainTek        | APC-1000W               | N/A                | N/A                                 | N/A              | Jan. 09, 2018                   | N/A           | Conduction<br>(CO05-HY)  |
| EMI Test Receiver    | Rohde & Schwarz | ESCI 7                  | 100724             | 9kHz~7GHz                           | Sep. 20, 2017    | Jan. 09, 2018                   | Sep. 19, 2018 | Conduction<br>(CO05-HY)  |
| LISN                 | Rohde & Schwarz | ENV216                  | 100080             | 9kHz~30MHz                          | Nov. 30, 2017    | Jan. 09, 2018                   | Nov. 29, 2018 | Conduction<br>(CO05-HY)  |
| Loop Antenna         | Rohde & Schwarz | HFH2-Z2                 | 100315             | 9 kHz~30 MHz                        | May 15, 2017     | Jan. 04, 2018~<br>Jan. 21, 2018 | May 14, 2019  | Radiation<br>(03CH10-HY) |
| Amplifier            | SONOMA          | 310N                    | 187311             | 9kHz~1GHz                           | Oct. 19, 2017    | Jan. 04, 2018~<br>Jan. 21, 2018 | Oct. 18, 2018 | Radiation<br>(03CH10-HY) |
| Amplifier            | MITEQ           | TTA1840-35-HG           | 1871923            | 18GHz~40GHz,<br>VSWR : 2.5:1<br>max | Jul. 18, 2017    | Jan. 04, 2018~<br>Jan. 21, 2018 | Jul. 17, 2018 | Radiation<br>(03CH10-HY) |
| Bilog Antenna        | TESEQ           | CBL<br>6111D&N-6-0<br>6 | 35414&AT-<br>N0602 | 30MHz~1GHz                          | Oct. 14, 2017    | Jan. 04, 2018~<br>Jan. 21, 2018 | Oct. 13, 2018 | Radiation<br>(03CH10-HY) |
| Horn Antenna         | SCHWARZBECK     | BBHA 9120 D             | 9120D-132<br>5     | 1GHz ~ 18GHz                        | Sep. 27, 2017    | Jan. 04, 2018~<br>Jan. 21, 2018 | Sep. 26, 2018 | Radiation<br>(03CH10-HY) |
| Preamplifier         | Keysight        | 83017A                  | MY532700<br>78     | 1GHz~26.5GHz                        | Oct. 25, 2017    | Jan. 04, 2018~<br>Jan. 21, 2018 | Oct. 24, 2018 | Radiation<br>(03CH10-HY) |
| Spectrum Analyzer    | Keysight        | N9010A                  | MY542004<br>85     | 10Hz ~ 44GHz                        | Oct. 31, 2017    | Jan. 04, 2018~<br>Jan. 21, 2018 | Oct. 30, 2018 | Radiation<br>(03CH10-HY) |
| Preamplifier         | MITEQ           | AMF-7D-0010<br>1800     | 2025787            | 1GHZ~18GHZ                          | Feb.13, 2017     | Jan. 04, 2018~<br>Jan. 21, 2018 | Feb. 12, 2018 | Radiation<br>(03CH10-HY) |
| Antenna Mast         | EMEC            | AM-BS-4500-B            | N/A                | 1~4m                                | N/A              | Jan. 04, 2018~<br>Jan. 21, 2018 | N/A           | Radiation<br>(03CH10-HY) |
| Turn Table           | EMEC            | TT 2200                 | N/A                | 0~360 Degree                        | N/A              | Jan. 04, 2018~<br>Jan. 21, 2018 | N/A           | Radiation<br>(03CH10-HY) |
| EMI Test Receiver    | Agilent         | N9038A<br>(MXE)         | MY554201<br>70     | 20Hz to<br>26.5GHz                  | Mar. 03, 2017    | Jan. 04, 2018~<br>Jan. 21, 2018 | Mar. 02, 2018 | Radiation<br>(03CH10-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK     | BBHA 9170               | BBHA9170<br>584    | 18GHz- 40GHz                        | Nov. 27, 2017    | Jan. 04, 2018~<br>Jan. 21, 2018 | Nov. 26, 2018 | Radiation<br>(03CH10-HY) |



## 5 Uncertainty of Evaluation

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

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 2.70 |
|----------------------------------------------------------------------------|------|

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

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.60 |
|----------------------------------------------------------------------------|------|

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

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.90 |
|----------------------------------------------------------------------------|------|

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

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.20 |
|----------------------------------------------------------------------------|------|

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

|                |                       |                    |       |    |
|----------------|-----------------------|--------------------|-------|----|
| Test Engineer: | Reece Lin / Kai Liao  | Temperature:       | 21~25 | °C |
| Test Date:     | 2018/1/4 ~ 2018/01/20 | Relative Humidity: | 51~54 | %  |

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

| Band IV |           |     |     |             |                     |                       |                      |                                |           |
|---------|-----------|-----|-----|-------------|---------------------|-----------------------|----------------------|--------------------------------|-----------|
| Mod.    | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) | 26 dB Bandwidth (MHz) | 6 dB Bandwidth (MHz) | 6dB Bandwidth min. Limit (MHz) | Pass/Fail |
| 11a     | 6M bps    | 1   | 149 | 5745        | 20.05               | 43.15                 | 16.30                | 0.5                            | Pass      |
| 11a     | 6Mbps     | 1   | 157 | 5785        | 20.75               | 44.95                 | 16.30                | 0.5                            | Pass      |
| 11a     | 6Mbps     | 1   | 165 | 5825        | 19.95               | 44.10                 | 16.30                | 0.5                            | Pass      |
| HT20    | MCS 0     | 1   | 149 | 5745        | 19.10               | 25.20                 | 17.55                | 0.5                            | Pass      |
| HT20    | MCS 0     | 1   | 157 | 5785        | 19.25               | 30.90                 | 17.50                | 0.5                            | Pass      |
| HT20    | MCS 0     | 1   | 165 | 5825        | 19.25               | 25.10                 | 17.50                | 0.5                            | Pass      |
| HT40    | MCS 0     | 1   | 151 | 5755        | 36.80               | 46.51                 | 35.10                | 0.5                            | Pass      |
| HT40    | MCS 0     | 1   | 159 | 5795        | 36.50               | 49.81                 | 34.92                | 0.5                            | Pass      |

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

| Band IV |           |     |     |             |                  |                               |                                 |          |  |           |
|---------|-----------|-----|-----|-------------|------------------|-------------------------------|---------------------------------|----------|--|-----------|
| Mod.    | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Conducted Power (dBm) | FCC Conducted Power Limit (dBm) | DG (dBi) |  | Pass/Fail |
| 11a     | 6M bps    | 1   | 149 | 5745        | 0.59             | 15.95                         | 30.00                           | -3.59    |  | Pass      |
| 11a     | 6Mbps     | 1   | 157 | 5785        | 0.59             | 15.93                         | 30.00                           | -3.59    |  | Pass      |
| 11a     | 6Mbps     | 1   | 165 | 5825        | 0.59             | 15.99                         | 30.00                           | -3.59    |  | Pass      |
| HT20    | MCS 0     | 1   | 149 | 5745        | 0.63             | 9.86                          | 30.00                           | -3.59    |  | Pass      |
| HT20    | MCS 0     | 1   | 157 | 5785        | 0.63             | 9.98                          | 30.00                           | -3.59    |  | Pass      |
| HT20    | MCS 0     | 1   | 165 | 5825        | 0.63             | 9.96                          | 30.00                           | -3.59    |  | Pass      |
| HT40    | MCS 0     | 1   | 151 | 5755        | 0.47             | 9.92                          | 30.00                           | -3.59    |  | Pass      |
| HT40    | MCS 0     | 1   | 159 | 5795        | 0.47             | 9.99                          | 30.00                           | -3.59    |  | Pass      |

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

| Band IV |           |                 |     |             |                  |                                 |                                    |                                |          |           |
|---------|-----------|-----------------|-----|-------------|------------------|---------------------------------|------------------------------------|--------------------------------|----------|-----------|
| Mod.    | Data Rate | N <sub>TX</sub> | CH. | Freq. (MHz) | Duty Factor (dB) | 10log (500kHz /RBW) Factor (dB) | Average Power Density (dBm/500kHz) | Average PSD Limit (dBm/500kHz) | DG (dBi) | Pass/Fail |
| 11a     | 6M bps    | 1               | 149 | 5745        | 0.59             | 2.22                            | 0.96                               | 30.00                          | -3.59    | Pass      |
| 11a     | 6Mbps     | 1               | 157 | 5785        | 0.59             | 2.22                            | 0.84                               | 30.00                          | -3.59    | Pass      |
| 11a     | 6Mbps     | 1               | 165 | 5825        | 0.59             | 2.22                            | 0.70                               | 30.00                          | -3.59    | Pass      |
| HT20    | MCS 0     | 1               | 149 | 5745        | 0.63             | 2.22                            | -5.07                              | 30.00                          | -3.59    | Pass      |
| HT20    | MCS 0     | 1               | 157 | 5785        | 0.63             | 2.22                            | -5.22                              | 30.00                          | -3.59    | Pass      |
| HT20    | MCS 0     | 1               | 165 | 5825        | 0.63             | 2.22                            | -5.47                              | 30.00                          | -3.59    | Pass      |
| HT40    | MCS 0     | 1               | 151 | 5755        | 0.47             | 2.22                            | -7.97                              | 30.00                          | -3.59    | Pass      |
| HT40    | MCS 0     | 1               | 159 | 5795        | 0.47             | 2.22                            | -7.78                              | 30.00                          | -3.59    | Pass      |



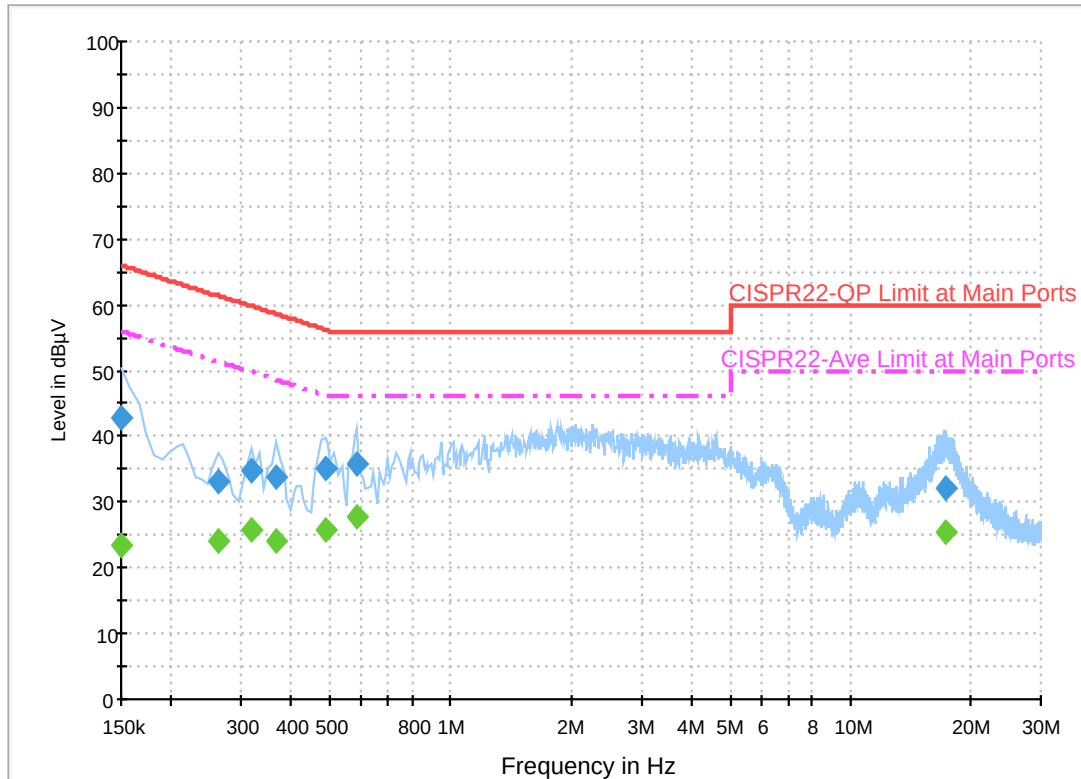
## Appendix B. AC Conducted Emission Test Results

|                 |          |                     |        |
|-----------------|----------|---------------------|--------|
| Test Engineer : | Blue Lan | Temperature :       | 24~25℃ |
|                 |          | Relative Humidity : | 46~48% |

## EUT Information

Report NO : 7D2018-03  
Test Mode : Mode 1  
Test Voltage : 120Vac/60Hz  
Phase : Line

ENV216 Auto Test FCC Power Bar - L



## Final Result 1

| Frequency (MHz) | QuasiPeak (dBμV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|--------|------|------------|-------------|--------------|
| 0.150000        | 43.0             | Off    | L1   | 19.5       | 23.0        | 66.0         |
| 0.262000        | 33.1             | Off    | L1   | 19.5       | 28.3        | 61.4         |
| 0.318000        | 34.7             | Off    | L1   | 19.5       | 25.1        | 59.8         |
| 0.366000        | 33.8             | Off    | L1   | 19.5       | 24.8        | 58.6         |
| 0.486000        | 35.2             | Off    | L1   | 19.5       | 21.0        | 56.2         |
| 0.582000        | 35.9             | Off    | L1   | 19.5       | 20.1        | 56.0         |
| 17.294000       | 32.0             | Off    | L1   | 19.8       | 28.0        | 60.0         |

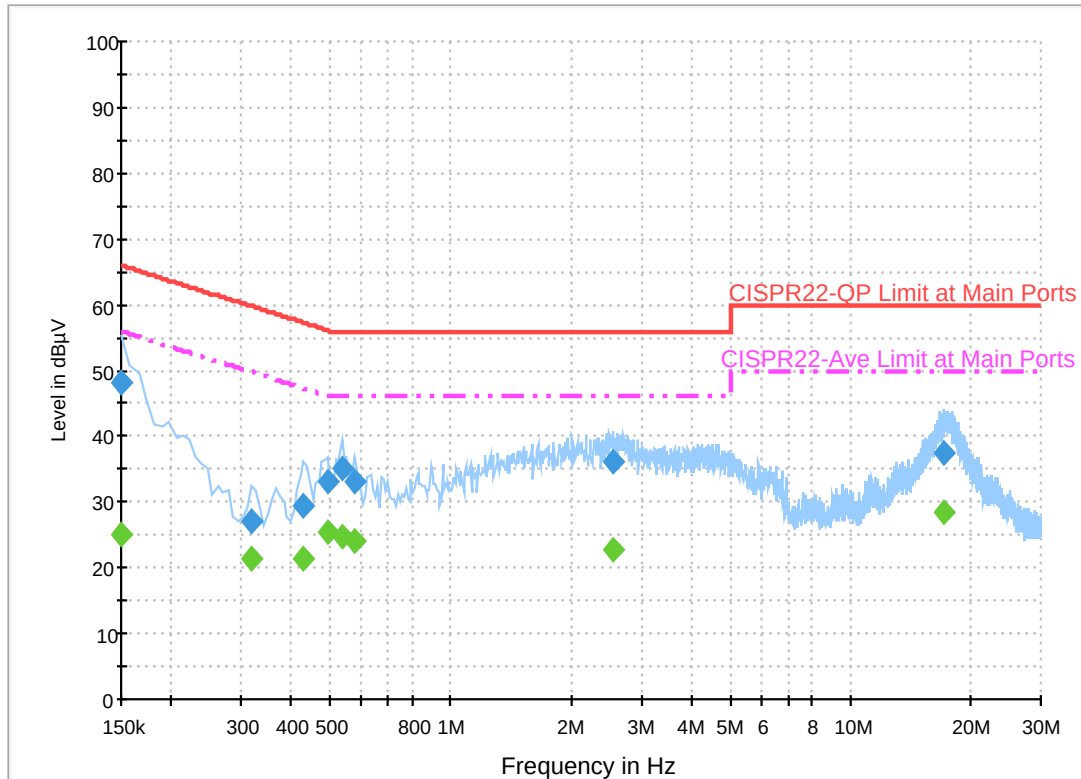
## Final Result 2

| Frequency (MHz) | Average (dBμV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.150000        | 23.5           | Off    | L1   | 19.5       | 32.5        | 56.0         |
| 0.262000        | 24.2           | Off    | L1   | 19.5       | 27.2        | 51.4         |
| 0.318000        | 25.7           | Off    | L1   | 19.5       | 24.1        | 49.8         |
| 0.366000        | 24.0           | Off    | L1   | 19.5       | 24.6        | 48.6         |
| 0.486000        | 25.7           | Off    | L1   | 19.5       | 20.5        | 46.2         |
| 0.582000        | 27.8           | Off    | L1   | 19.5       | 18.2        | 46.0         |
| 17.294000       | 25.5           | Off    | L1   | 19.8       | 24.5        | 50.0         |

## EUT Information

Report NO : 7D2018-03  
Test Mode : Mode 1  
Test Voltage : 120Vac/60Hz  
Phase : Neutral

ENV216 Auto Test FCC Power Bar - N



## Final Result 1

| Frequency (MHz) | QuasiPeak (dBμV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|--------|------|------------|-------------|--------------|
| 0.150000        | 48.3             | Off    | N    | 19.5       | 17.7        | 66.0         |
| 0.318000        | 27.2             | Off    | N    | 19.5       | 32.6        | 59.8         |
| 0.430000        | 29.4             | Off    | N    | 19.5       | 27.9        | 57.3         |
| 0.494000        | 33.0             | Off    | N    | 19.5       | 23.1        | 56.1         |
| 0.534000        | 35.2             | Off    | N    | 19.5       | 20.8        | 56.0         |
| 0.574000        | 33.1             | Off    | N    | 19.5       | 22.9        | 56.0         |
| 2.558000        | 36.1             | Off    | N    | 19.5       | 19.9        | 56.0         |
| 17.078000       | 37.4             | Off    | N    | 19.8       | 22.6        | 60.0         |

## Final Result 2

| Frequency (MHz) | Average (dBμV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.150000        | 25.1           | Off    | N    | 19.5       | 30.9        | 56.0         |
| 0.318000        | 21.5           | Off    | N    | 19.5       | 28.3        | 49.8         |
| 0.430000        | 21.5           | Off    | N    | 19.5       | 25.8        | 47.3         |
| 0.494000        | 25.6           | Off    | N    | 19.5       | 20.5        | 46.1         |
| 0.534000        | 24.7           | Off    | N    | 19.5       | 21.3        | 46.0         |
| 0.574000        | 24.0           | Off    | N    | 19.5       | 22.0        | 46.0         |
| 2.558000        | 22.6           | Off    | N    | 19.5       | 23.4        | 46.0         |
| 17.078000       | 28.6           | Off    | N    | 19.8       | 21.4        | 50.0         |



## Appendix C. Radiated Spurious Emission

|                 |                            |                     |         |
|-----------------|----------------------------|---------------------|---------|
| Test Engineer : | Lance Chiang and Yun Huang | Temperature :       | 22~24°C |
|                 |                            | Relative Humidity : | 52~58%  |

### Band 4 - 5725~5850MHz

#### WiFi 802.11a (Band Edge @ 3m)

| WIFI                         | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | 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 ) |
| 802.11a<br>CH 149<br>5745MHz |      | 5641.4    | 48.48      | -19.72 | 68.2       | 40.09    | 32.24    | 8.7    | 32.55  | 118    | 274     | P       | H       |
|                              |      | 5691.8    | 49.33      | -49.82 | 99.15      | 40.72    | 32.29    | 8.89   | 32.57  | 118    | 274     | P       | H       |
|                              |      | 5719.4    | 58.82      | -51.81 | 110.63     | 50.07    | 32.32    | 9.01   | 32.58  | 118    | 274     | P       | H       |
|                              |      | 5724.6    | 68.32      | -52.97 | 121.29     | 59.57    | 32.32    | 9.01   | 32.58  | 118    | 274     | P       | H       |
|                              | *    | 5745      | 106.81     | -      | -          | 97.99    | 32.34    | 9.07   | 32.59  | 118    | 274     | P       | H       |
|                              | *    | 5745      | 99.49      | -      | -          | 90.67    | 32.34    | 9.07   | 32.59  | 118    | 274     | A       | H       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |      | 5608.8    | 48.4       | -19.8  | 68.2       | 40.16    | 32.2     | 8.58   | 32.54  | 107    | 324     | P       | V       |
|                              |      | 5680      | 48.84      | -41.6  | 90.44      | 40.31    | 32.27    | 8.83   | 32.57  | 107    | 324     | P       | V       |
|                              |      | 5719.8    | 57.13      | -53.61 | 110.74     | 48.38    | 32.32    | 9.01   | 32.58  | 107    | 324     | P       | V       |
|                              |      | 5724.4    | 68.52      | -52.31 | 120.83     | 59.77    | 32.32    | 9.01   | 32.58  | 107    | 324     | P       | V       |
|                              | *    | 5745      | 102.73     | -      | -          | 93.91    | 32.34    | 9.07   | 32.59  | 107    | 324     | P       | V       |
|                              | *    | 5745      | 94.76      | -      | -          | 85.94    | 32.34    | 9.07   | 32.59  | 107    | 324     | A       | V       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |



| 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 ) | Cable<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 ) |
|------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11a<br>CH 157<br>5785MHz |      | 5648.2               | 47.96               | -20.24                  | 68.2                        | 39.5                      | 32.24                         | 8.77                    | 32.55                      | 102                  | 279                     | P                       | H               |
|                              |      | 5694.6               | 49.52               | -51.7                   | 101.22                      | 40.91                     | 32.29                         | 8.89                    | 32.57                      | 102                  | 279                     | P                       | H               |
|                              |      | 5707                 | 48.21               | -58.95                  | 107.16                      | 39.53                     | 32.31                         | 8.95                    | 32.58                      | 102                  | 279                     | P                       | H               |
|                              |      | 5723.4               | 47.62               | -70.93                  | 118.55                      | 38.87                     | 32.32                         | 9.01                    | 32.58                      | 102                  | 279                     | P                       | H               |
|                              | *    | 5785                 | 108.44              | -                       | -                           | 99.47                     | 32.38                         | 9.2                     | 32.61                      | 102                  | 279                     | P                       | H               |
|                              | *    | 5785                 | 100.98              | -                       | -                           | 92.01                     | 32.38                         | 9.2                     | 32.61                      | 102                  | 279                     | A                       | H               |
|                              |      | 5851.2               | 49.49               | -69.97                  | 119.46                      | 40.52                     | 32.44                         | 9.16                    | 32.63                      | 102                  | 279                     | P                       | H               |
|                              |      | 5874.8               | 49.09               | -56.17                  | 105.26                      | 40.12                     | 32.48                         | 9.13                    | 32.64                      | 102                  | 279                     | P                       | H               |
|                              |      | 5881.6               | 49.36               | -50.94                  | 100.3                       | 40.42                     | 32.48                         | 9.1                     | 32.64                      | 102                  | 279                     | P                       | H               |
|                              |      | 5931                 | 48.85               | -19.35                  | 68.2                        | 39.93                     | 32.53                         | 9.04                    | 32.65                      | 102                  | 279                     | P                       | H               |
|                              |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |      | 5622.2               | 47.61               | -20.59                  | 68.2                        | 39.29                     | 32.22                         | 8.64                    | 32.54                      | 100                  | 324                     | P                       | V               |
|                              |      | 5653.6               | 48.81               | -22.06                  | 70.87                       | 40.33                     | 32.26                         | 8.77                    | 32.55                      | 100                  | 324                     | P                       | V               |
|                              |      | 5711.6               | 48.6                | -59.85                  | 108.45                      | 39.92                     | 32.31                         | 8.95                    | 32.58                      | 100                  | 324                     | P                       | V               |
|                              |      | 5723.8               | 46.67               | -72.79                  | 119.46                      | 37.92                     | 32.32                         | 9.01                    | 32.58                      | 100                  | 324                     | P                       | V               |
|                              | *    | 5785                 | 102.47              | -                       | -                           | 93.5                      | 32.38                         | 9.2                     | 32.61                      | 100                  | 324                     | P                       | V               |
|                              | *    | 5785                 | 95.15               | -                       | -                           | 86.18                     | 32.38                         | 9.2                     | 32.61                      | 100                  | 324                     | A                       | V               |
|                              |      | 5852.2               | 49.13               | -68.05                  | 117.18                      | 40.16                     | 32.44                         | 9.16                    | 32.63                      | 100                  | 324                     | P                       | V               |
|                              |      | 5862                 | 48.95               | -59.89                  | 108.84                      | 40                        | 32.46                         | 9.13                    | 32.64                      | 100                  | 324                     | P                       | V               |
|                              |      | 5882.6               | 48.67               | -50.89                  | 99.56                       | 39.73                     | 32.48                         | 9.1                     | 32.64                      | 100                  | 324                     | P                       | V               |
|                              |      | 5948.4               | 48.61               | -19.59                  | 68.2                        | 39.71                     | 32.55                         | 9.01                    | 32.66                      | 100                  | 324                     | P                       | V               |
|                              |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                              |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |



| 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 ) | Cable<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 ) |
|------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11a<br>CH 165<br>5825MHz | *                                                                                           | 5825                 | 109.27              | -                       | -                           | 100.23                    | 32.43                         | 9.23                    | 32.62                      | 100                  | 277                     | P                       | H               |
|                              | *                                                                                           | 5825                 | 101.57              | -                       | -                           | 92.53                     | 32.43                         | 9.23                    | 32.62                      | 100                  | 277                     | A                       | H               |
|                              |                                                                                             | 5850                 | 63.9                | -58.3                   | 122.2                       | 54.93                     | 32.44                         | 9.16                    | 32.63                      | 100                  | 277                     | P                       | H               |
|                              |                                                                                             | 5855                 | 60.22               | -50.58                  | 110.8                       | 51.23                     | 32.46                         | 9.16                    | 32.63                      | 100                  | 277                     | P                       | H               |
|                              |                                                                                             | 5877.4               | 53.81               | -49.61                  | 103.42                      | 44.84                     | 32.48                         | 9.13                    | 32.64                      | 100                  | 277                     | P                       | H               |
|                              |                                                                                             | 5925.2               | 48.82               | -19.38                  | 68.2                        | 39.9                      | 32.53                         | 9.04                    | 32.65                      | 100                  | 277                     | P                       | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              | *                                                                                           | 5825                 | 103.16              | -                       | -                           | 94.12                     | 32.43                         | 9.23                    | 32.62                      | 100                  | 320                     | P                       | V               |
|                              | *                                                                                           | 5825                 | 95.63               | -                       | -                           | 86.59                     | 32.43                         | 9.23                    | 32.62                      | 100                  | 320                     | A                       | V               |
|                              |                                                                                             | 5854.8               | 57.67               | -53.59                  | 111.26                      | 48.68                     | 32.46                         | 9.16                    | 32.63                      | 100                  | 320                     | P                       | V               |
|                              |                                                                                             | 5859.6               | 54.59               | -54.92                  | 109.51                      | 45.61                     | 32.46                         | 9.16                    | 32.64                      | 100                  | 320                     | P                       | V               |
|                              |                                                                                             | 5878                 | 51.27               | -51.7                   | 102.97                      | 42.3                      | 32.48                         | 9.13                    | 32.64                      | 100                  | 320                     | P                       | V               |
|                              |                                                                                             | 5933.8               | 48.91               | -19.29                  | 68.2                        | 40.02                     | 32.53                         | 9.01                    | 32.65                      | 100                  | 320                     | P                       | V               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | 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 802.11a (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 ) | Cable<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 ) |
|------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11a<br>CH 149<br>5745MHz |                                                                                             | 11490                | 45.16               | -28.84                  | 74                          | 58                        | 39.81                         | 12.74                   | 65.39                      | 100                  | 0                       | P                       | H               |
|                              |                                                                                             | 17235                | 47.71               | -20.49                  | 68.2                        | 54.2                      | 41.02                         | 16.76                   | 64.27                      | 100                  | 0                       | P                       | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |                                                                                             | 11490                | 45.94               | -28.06                  | 74                          | 58.78                     | 39.81                         | 12.74                   | 65.39                      | 100                  | 0                       | P                       | V               |
|                              |                                                                                             | 17235                | 48.62               | -19.58                  | 68.2                        | 55.11                     | 41.02                         | 16.76                   | 64.27                      | 100                  | 0                       | P                       | V               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
| 802.11a<br>CH 157<br>5785MHz |                                                                                             | 11570                | 44.97               | -29.03                  | 74                          | 57.85                     | 39.69                         | 12.8                    | 65.37                      | 100                  | 0                       | P                       | H               |
|                              |                                                                                             | 17355                | 45.94               | -22.26                  | 68.2                        | 51.61                     | 41.58                         | 16.86                   | 64.11                      | 100                  | 0                       | P                       | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |                                                                                             | 11570                | 47.1                | -26.9                   | 74                          | 59.98                     | 39.69                         | 12.8                    | 65.37                      | 100                  | 0                       | P                       | V               |
|                              |                                                                                             | 17355                | 46.61               | -21.59                  | 68.2                        | 52.28                     | 41.58                         | 16.86                   | 64.11                      | 100                  | 0                       | P                       | V               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
| 802.11a<br>CH 165<br>5825MHz |                                                                                             | 11650                | 44.84               | -29.16                  | 74                          | 57.73                     | 39.58                         | 12.87                   | 65.34                      | 100                  | 0                       | P                       | H               |
|                              |                                                                                             | 17475                | 47.97               | -20.23                  | 68.2                        | 52.82                     | 42.14                         | 16.96                   | 63.95                      | 100                  | 0                       | P                       | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                              |                                                                                             | 11650                | 46.5                | -27.5                   | 74                          | 59.39                     | 39.58                         | 12.87                   | 65.34                      | 100                  | 0                       | P                       | V               |
|                              |                                                                                             | 17475                | 47.52               | -20.68                  | 68.2                        | 52.37                     | 42.14                         | 16.96                   | 63.95                      | 100                  | 0                       | 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 (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 ) | Cable<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 149<br>5745MHz |      | 5626                 | 49.03               | -19.17                  | 68.2                        | 40.71                     | 32.22                         | 8.64                    | 32.54                      | 300                  | 62                      | P                       | H               |
|                                      |      | 5695.4               | 48.81               | -53                     | 101.81                      | 40.2                      | 32.29                         | 8.89                    | 32.57                      | 300                  | 62                      | P                       | H               |
|                                      |      | 5720                 | 55.91               | -54.89                  | 110.8                       | 47.16                     | 32.32                         | 9.01                    | 32.58                      | 300                  | 62                      | P                       | H               |
|                                      |      | 5724.4               | 61.83               | -59                     | 120.83                      | 53.08                     | 32.32                         | 9.01                    | 32.58                      | 300                  | 62                      | P                       | H               |
|                                      | *    | 5745                 | 100.61              | -                       | -                           | 91.79                     | 32.34                         | 9.07                    | 32.59                      | 300                  | 62                      | P                       | H               |
|                                      | *    | 5745                 | 92.02               | -                       | -                           | 83.2                      | 32.34                         | 9.07                    | 32.59                      | 300                  | 62                      | A                       | H               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |      | 5609.2               | 48.64               | -19.56                  | 68.2                        | 40.4                      | 32.2                          | 8.58                    | 32.54                      | 302                  | 108                     | P                       | V               |
|                                      |      | 5684.4               | 47.85               | -45.84                  | 93.69                       | 39.24                     | 32.29                         | 8.89                    | 32.57                      | 302                  | 108                     | P                       | V               |
|                                      |      | 5720                 | 50.85               | -59.95                  | 110.8                       | 42.1                      | 32.32                         | 9.01                    | 32.58                      | 302                  | 108                     | P                       | V               |
|                                      |      | 5723.8               | 60.76               | -58.7                   | 119.46                      | 52.01                     | 32.32                         | 9.01                    | 32.58                      | 302                  | 108                     | P                       | V               |
|                                      | *    | 5745                 | 100.88              | -                       | -                           | 92.06                     | 32.34                         | 9.07                    | 32.59                      | 302                  | 108                     | P                       | V               |
|                                      | *    | 5745                 | 92.55               | -                       | -                           | 83.73                     | 32.34                         | 9.07                    | 32.59                      | 302                  | 108                     | A                       | V               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |



| 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 ) | Cable<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 157<br>5785MHz |      | 5628.4               | 48.65               | -19.55                  | 68.2                        | 40.28                     | 32.22                         | 8.7                     | 32.55                      | 298                  | 62                      | P                       | H               |
|                                      |      | 5684                 | 49.03               | -44.37                  | 93.4                        | 40.42                     | 32.29                         | 8.89                    | 32.57                      | 298                  | 62                      | P                       | H               |
|                                      |      | 5701.8               | 47.97               | -57.73                  | 105.7                       | 39.28                     | 32.31                         | 8.95                    | 32.57                      | 298                  | 62                      | P                       | H               |
|                                      |      | 5721.2               | 47.21               | -66.33                  | 113.54                      | 38.46                     | 32.32                         | 9.01                    | 32.58                      | 298                  | 62                      | P                       | H               |
|                                      | *    | 5785                 | 100.86              | -                       | -                           | 91.89                     | 32.38                         | 9.2                     | 32.61                      | 298                  | 62                      | P                       | H               |
|                                      | *    | 5785                 | 92.07               | -                       | -                           | 83.1                      | 32.38                         | 9.2                     | 32.61                      | 298                  | 62                      | A                       | H               |
|                                      |      | 5854.4               | 47.05               | -65.12                  | 112.17                      | 38.06                     | 32.46                         | 9.16                    | 32.63                      | 298                  | 62                      | P                       | H               |
|                                      |      | 5874                 | 48.08               | -57.4                   | 105.48                      | 39.11                     | 32.48                         | 9.13                    | 32.64                      | 298                  | 62                      | P                       | H               |
|                                      |      | 5891.4               | 48.84               | -44.19                  | 93.03                       | 39.88                     | 32.5                          | 9.1                     | 32.64                      | 298                  | 62                      | P                       | H               |
|                                      |      | 5925.8               | 47.59               | -20.61                  | 68.2                        | 38.67                     | 32.53                         | 9.04                    | 32.65                      | 298                  | 62                      | P                       | H               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |      | 5609.8               | 47.89               | -20.31                  | 68.2                        | 39.59                     | 32.2                          | 8.64                    | 32.54                      | 301                  | 112                     | P                       | V               |
|                                      |      | 5653.6               | 49.05               | -21.82                  | 70.87                       | 40.57                     | 32.26                         | 8.77                    | 32.55                      | 301                  | 112                     | P                       | V               |
|                                      |      | 5715.6               | 48.4                | -61.17                  | 109.57                      | 39.72                     | 32.31                         | 8.95                    | 32.58                      | 301                  | 112                     | P                       | V               |
|                                      |      | 5721.8               | 46.8                | -68.1                   | 114.9                       | 38.05                     | 32.32                         | 9.01                    | 32.58                      | 301                  | 112                     | P                       | V               |
|                                      | *    | 5785                 | 99.45               | -                       | -                           | 90.48                     | 32.38                         | 9.2                     | 32.61                      | 301                  | 112                     | P                       | V               |
|                                      | *    | 5785                 | 91.51               | -                       | -                           | 82.54                     | 32.38                         | 9.2                     | 32.61                      | 301                  | 112                     | A                       | V               |
|                                      |      | 5852.2               | 48.39               | -68.79                  | 117.18                      | 39.42                     | 32.44                         | 9.16                    | 32.63                      | 301                  | 112                     | P                       | V               |
|                                      |      | 5862                 | 49.33               | -59.51                  | 108.84                      | 40.38                     | 32.46                         | 9.13                    | 32.64                      | 301                  | 112                     | P                       | V               |
|                                      |      | 5892.6               | 48.38               | -43.76                  | 92.14                       | 39.42                     | 32.5                          | 9.1                     | 32.64                      | 301                  | 112                     | P                       | V               |
|                                      |      | 5932.8               | 48.82               | -19.38                  | 68.2                        | 39.9                      | 32.53                         | 9.04                    | 32.65                      | 301                  | 112                     | P                       | V               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |



| 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 ) | Cable<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                 | 101.1               | -                       | -                           | 92.06                     | 32.43                         | 9.23                    | 32.62                      | 302                  | 64                      | P                       | H               |
|                                      | *                                                                                           | 5825                 | 93.47               | -                       | -                           | 84.43                     | 32.43                         | 9.23                    | 32.62                      | 302                  | 64                      | A                       | H               |
|                                      |                                                                                             | 5852.4               | 52.73               | -64                     | 116.73                      | 43.76                     | 32.44                         | 9.16                    | 32.63                      | 302                  | 64                      | P                       | H               |
|                                      |                                                                                             | 5855.2               | 50.68               | -60.06                  | 110.74                      | 41.69                     | 32.46                         | 9.16                    | 32.63                      | 302                  | 64                      | P                       | H               |
|                                      |                                                                                             | 5876.8               | 50.71               | -53.15                  | 103.86                      | 41.74                     | 32.48                         | 9.13                    | 32.64                      | 302                  | 64                      | P                       | H               |
|                                      |                                                                                             | 5937                 | 48.84               | -19.36                  | 68.2                        | 39.96                     | 32.53                         | 9.01                    | 32.66                      | 302                  | 64                      | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      | *                                                                                           | 5825                 | 99.7                | -                       | -                           | 90.66                     | 32.43                         | 9.23                    | 32.62                      | 297                  | 112                     | P                       | V               |
|                                      | *                                                                                           | 5825                 | 91.56               | -                       | -                           | 82.52                     | 32.43                         | 9.23                    | 32.62                      | 297                  | 112                     | A                       | V               |
|                                      |                                                                                             | 5850.2               | 52.35               | -69.39                  | 121.74                      | 43.38                     | 32.44                         | 9.16                    | 32.63                      | 297                  | 112                     | P                       | V               |
|                                      |                                                                                             | 5869.4               | 48.6                | -58.17                  | 106.77                      | 39.65                     | 32.46                         | 9.13                    | 32.64                      | 297                  | 112                     | P                       | V               |
|                                      |                                                                                             | 5878.6               | 48.97               | -53.56                  | 102.53                      | 40                        | 32.48                         | 9.13                    | 32.64                      | 297                  | 112                     | P                       | V               |
|                                      |                                                                                             | 5927                 | 49.02               | -19.18                  | 68.2                        | 40.1                      | 32.53                         | 9.04                    | 32.65                      | 297                  | 112                     | 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 ) | Cable<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 149<br>5745MHz |                                                                                             | 11490                | 46.53               | -27.47                  | 74                          | 59.37                     | 39.81                         | 12.74                   | 65.39                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 17235                | 48.19               | -20.01                  | 68.2                        | 54.68                     | 41.02                         | 16.76                   | 64.27                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11490                | 47.63               | -26.37                  | 74                          | 60.47                     | 39.81                         | 12.74                   | 65.39                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 17235                | 48.74               | -19.46                  | 68.2                        | 55.23                     | 41.02                         | 16.76                   | 64.27                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
| 802.11n<br>HT20<br>CH 157<br>5785MHz |                                                                                             | 11570                | 46.65               | -27.35                  | 74                          | 59.53                     | 39.69                         | 12.8                    | 65.37                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 17355                | 47.31               | -20.89                  | 68.2                        | 52.98                     | 41.58                         | 16.86                   | 64.11                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11570                | 46.71               | -27.29                  | 74                          | 59.59                     | 39.69                         | 12.8                    | 65.37                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 17355                | 46.64               | -21.56                  | 68.2                        | 52.31                     | 41.58                         | 16.86                   | 64.11                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
| 802.11n<br>HT20<br>CH 165<br>5825MHz |                                                                                             | 11650                | 48.57               | -25.43                  | 74                          | 61.46                     | 39.58                         | 12.87                   | 65.34                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 17475                | 47.86               | -20.34                  | 68.2                        | 52.71                     | 42.14                         | 16.96                   | 63.95                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11650                | 47.19               | -26.81                  | 74                          | 60.08                     | 39.58                         | 12.87                   | 65.34                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 17475                | 47.44               | -20.76                  | 68.2                        | 52.29                     | 42.14                         | 16.96                   | 63.95                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



## Band 4 5725~5850MHz

## WIFI 802.11n HT40 (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 ) | Cable<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 |      | 5637.2               | 48.79               | -19.41                  | 68.2                        | 40.4                      | 32.24                         | 8.7                     | 32.55                      | 303                  | 63                      | P                       | H               |
|                                      |      | 5699.2               | 48.63               | -55.98                  | 104.61                      | 40.02                     | 32.29                         | 8.89                    | 32.57                      | 303                  | 63                      | P                       | H               |
|                                      |      | 5719.4               | 60.85               | -49.78                  | 110.63                      | 52.1                      | 32.32                         | 9.01                    | 32.58                      | 303                  | 63                      | P                       | H               |
|                                      |      | 5724.6               | 62.85               | -58.44                  | 121.29                      | 54.1                      | 32.32                         | 9.01                    | 32.58                      | 303                  | 63                      | P                       | H               |
|                                      | *    | 5755                 | 98.7                | -                       | -                           | 89.79                     | 32.36                         | 9.14                    | 32.59                      | 303                  | 63                      | P                       | H               |
|                                      | *    | 5755                 | 90.13               | -                       | -                           | 81.22                     | 32.36                         | 9.14                    | 32.59                      | 303                  | 63                      | A                       | H               |
|                                      |      | 5854.6               | 49.37               | -62.34                  | 111.71                      | 40.38                     | 32.46                         | 9.16                    | 32.63                      | 303                  | 63                      | P                       | H               |
|                                      |      | 5862                 | 49.15               | -59.69                  | 108.84                      | 40.2                      | 32.46                         | 9.13                    | 32.64                      | 303                  | 63                      | P                       | H               |
|                                      |      | 5898.4               | 48.94               | -38.91                  | 87.85                       | 40.01                     | 32.5                          | 9.07                    | 32.64                      | 303                  | 63                      | P                       | H               |
|                                      |      | 5938.6               | 48.76               | -19.44                  | 68.2                        | 39.86                     | 32.55                         | 9.01                    | 32.66                      | 303                  | 63                      | P                       | H               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |      | 5647.6               | 48.89               | -19.31                  | 68.2                        | 40.43                     | 32.24                         | 8.77                    | 32.55                      | 284                  | 114                     | P                       | V               |
|                                      |      | 5693                 | 48.52               | -51.52                  | 100.04                      | 39.91                     | 32.29                         | 8.89                    | 32.57                      | 284                  | 114                     | P                       | V               |
|                                      |      | 5719                 | 58.62               | -51.9                   | 110.52                      | 49.87                     | 32.32                         | 9.01                    | 32.58                      | 284                  | 114                     | P                       | V               |
|                                      |      | 5721.2               | 59.94               | -53.6                   | 113.54                      | 51.19                     | 32.32                         | 9.01                    | 32.58                      | 284                  | 114                     | P                       | V               |
|                                      | *    | 5755                 | 97.24               | -                       | -                           | 88.33                     | 32.36                         | 9.14                    | 32.59                      | 284                  | 114                     | P                       | V               |
|                                      | *    | 5755                 | 87.86               | -                       | -                           | 78.95                     | 32.36                         | 9.14                    | 32.59                      | 284                  | 114                     | A                       | V               |
|                                      |      | 5851                 | 49.33               | -70.59                  | 119.92                      | 40.36                     | 32.44                         | 9.16                    | 32.63                      | 284                  | 114                     | P                       | V               |
|                                      |      | 5866.4               | 49.43               | -58.18                  | 107.61                      | 40.48                     | 32.46                         | 9.13                    | 32.64                      | 284                  | 114                     | P                       | V               |
|                                      |      | 5899                 | 49.01               | -38.39                  | 87.4                        | 40.08                     | 32.5                          | 9.07                    | 32.64                      | 284                  | 114                     | P                       | V               |
|                                      |      | 5942                 | 48.18               | -20.02                  | 68.2                        | 39.28                     | 32.55                         | 9.01                    | 32.66                      | 284                  | 114                     | P                       | V               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |      |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |



| 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 ) | Cable<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 159<br>5795MHz |                                                                                             | 5606.8               | 49.16               | -19.04                  | 68.2                        | 40.92                     | 32.2                          | 8.58                    | 32.54                      | 301                  | 62                      | P                       | H               |
|                                      |                                                                                             | 5687.6               | 49.03               | -47.02                  | 96.05                       | 40.42                     | 32.29                         | 8.89                    | 32.57                      | 301                  | 62                      | P                       | H               |
|                                      |                                                                                             | 5715.4               | 48.81               | -60.7                   | 109.51                      | 40.13                     | 32.31                         | 8.95                    | 32.58                      | 301                  | 62                      | P                       | H               |
|                                      |                                                                                             | 5722                 | 48.7                | -66.66                  | 115.36                      | 39.95                     | 32.32                         | 9.01                    | 32.58                      | 301                  | 62                      | P                       | H               |
|                                      | *                                                                                           | 5795                 | 99.23               | -                       | -                           | 90.19                     | 32.39                         | 9.26                    | 32.61                      | 301                  | 62                      | P                       | H               |
|                                      | *                                                                                           | 5795                 | 89.28               | -                       | -                           | 80.24                     | 32.39                         | 9.26                    | 32.61                      | 301                  | 62                      | A                       | H               |
|                                      |                                                                                             | 5854.4               | 48.85               | -63.32                  | 112.17                      | 39.86                     | 32.46                         | 9.16                    | 32.63                      | 301                  | 62                      | P                       | H               |
|                                      |                                                                                             | 5866.4               | 49.2                | -58.41                  | 107.61                      | 40.25                     | 32.46                         | 9.13                    | 32.64                      | 301                  | 62                      | P                       | H               |
|                                      |                                                                                             | 5901.6               | 49.21               | -36.27                  | 85.48                       | 40.28                     | 32.5                          | 9.07                    | 32.64                      | 301                  | 62                      | P                       | H               |
|                                      |                                                                                             | 5948.6               | 48.55               | -19.65                  | 68.2                        | 39.65                     | 32.55                         | 9.01                    | 32.66                      | 301                  | 62                      | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 5601.8               | 48.25               | -19.95                  | 68.2                        | 40.01                     | 32.2                          | 8.58                    | 32.54                      | 301                  | 107                     | P                       | V               |
|                                      |                                                                                             | 5687.6               | 49.35               | -46.7                   | 96.05                       | 40.74                     | 32.29                         | 8.89                    | 32.57                      | 301                  | 107                     | P                       | V               |
|                                      |                                                                                             | 5702.6               | 47.77               | -58.16                  | 105.93                      | 39.08                     | 32.31                         | 8.95                    | 32.57                      | 301                  | 107                     | P                       | V               |
|                                      |                                                                                             | 5723.6               | 48.02               | -70.99                  | 119.01                      | 39.27                     | 32.32                         | 9.01                    | 32.58                      | 301                  | 107                     | P                       | V               |
|                                      | *                                                                                           | 5795                 | 97                  | -                       | -                           | 87.96                     | 32.39                         | 9.26                    | 32.61                      | 301                  | 107                     | P                       | V               |
|                                      | *                                                                                           | 5795                 | 87.28               | -                       | -                           | 78.24                     | 32.39                         | 9.26                    | 32.61                      | 301                  | 107                     | A                       | V               |
|                                      |                                                                                             | 5851.4               | 48.6                | -70.41                  | 119.01                      | 39.63                     | 32.44                         | 9.16                    | 32.63                      | 301                  | 107                     | P                       | V               |
|                                      |                                                                                             | 5866.6               | 48.75               | -58.8                   | 107.55                      | 39.8                      | 32.46                         | 9.13                    | 32.64                      | 301                  | 107                     | P                       | V               |
|                                      |                                                                                             | 5876.6               | 48.79               | -55.22                  | 104.01                      | 39.82                     | 32.48                         | 9.13                    | 32.64                      | 301                  | 107                     | P                       | V               |
|                                      |                                                                                             | 5933                 | 49.74               | -18.46                  | 68.2                        | 40.82                     | 32.53                         | 9.04                    | 32.65                      | 301                  | 107                     | P                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



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

| WIFI<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 ) | Cable<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 |                                                                                             | 11510                | 46.69               | -27.31                  | 74                          | 59.54                     | 39.8                          | 12.75                   | 65.4                       | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 17265                | 47.18               | -21.02                  | 68.2                        | 53.44                     | 41.18                         | 16.79                   | 64.23                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11510                | 48.2                | -25.8                   | 74                          | 61.05                     | 39.8                          | 12.75                   | 65.4                       | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 17265                | 46.99               | -21.21                  | 68.2                        | 53.25                     | 41.18                         | 16.79                   | 64.23                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
| 802.11n<br>HT40<br>CH 159<br>5795MHz |                                                                                             | 11590                | 47.11               | -26.89                  | 74                          | 60.01                     | 39.66                         | 12.81                   | 65.37                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 17385                | 47.91               | -20.29                  | 68.2                        | 53.34                     | 41.74                         | 16.89                   | 64.06                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11590                | 46.75               | -27.25                  | 74                          | 59.65                     | 39.66                         | 12.81                   | 65.37                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 17385                | 48.84               | -19.36                  | 68.2                        | 54.27                     | 41.74                         | 16.89                   | 64.06                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         | V               |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



## Emission below 1GHz

## 5GHz WIFI 802.11n HT40 (LF @ 3m)

| WIFI                          | Note                                                                       | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | 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 ) |
| 5GHz<br>802.11n<br>HT40<br>LF |                                                                            | 128.28    | 21.85      | -21.65 | 43.5       | 35.54    | 17.57    | 1.15   | 32.69  | -      | -       | P       | H       |
|                               |                                                                            | 146.37    | 24.67      | -18.83 | 43.5       | 38.52    | 17.23    | 1.24   | 32.68  | -      | -       | P       | H       |
|                               |                                                                            | 173.37    | 21.9       | -21.6  | 43.5       | 37.28    | 15.44    | 1.41   | 32.66  | -      | -       | P       | H       |
|                               |                                                                            | 568.8     | 26.82      | -19.18 | 46         | 30.62    | 25.87    | 2.51   | 32.76  | -      | -       | P       | H       |
|                               |                                                                            | 751.5     | 30.4       | -15.6  | 46         | 31.33    | 28.28    | 2.9    | 32.71  | -      | -       | P       | H       |
|                               |                                                                            | 918.1     | 32.57      | -13.43 | 46         | 31.2     | 29.29    | 3.22   | 31.89  | 100    | 0       | P       | H       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                               |                                                                            | 36.75     | 27.79      | -12.21 | 40         | 38.82    | 21.04    | 0.6    | 32.77  | 100    | 0       | P       | V       |
|                               |                                                                            | 108.03    | 21.83      | -21.67 | 43.5       | 36.49    | 16.75    | 1.05   | 32.7   | -      | -       | P       | V       |
|                               |                                                                            | 148.8     | 21.97      | -21.53 | 43.5       | 35.81    | 17.14    | 1.33   | 32.68  | -      | -       | P       | V       |
|                               |                                                                            | 754.3     | 30.3       | -15.7  | 46         | 31.2     | 28.31    | 2.9    | 32.71  | -      | -       | P       | V       |
|                               |                                                                            | 955.2     | 32.91      | -13.09 | 46         | 29.38    | 30.9     | 3.29   | 31.47  | -      | -       | P       | V       |
|                               |                                                                            | 971.3     | 34.21      | -19.79 | 54         | 30.36    | 31.01    | 3.32   | 31.29  | -      | -       | P       | V       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                               |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
| Remark                        | 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>Horizontal</b> or <b>Vertical</b>                                                                                                                     |



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

| WIFI    | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | 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. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

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

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable 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) + Cable 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

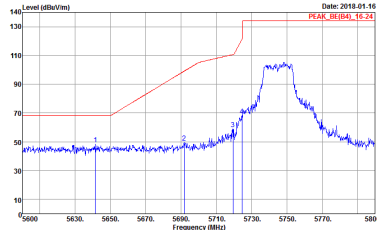
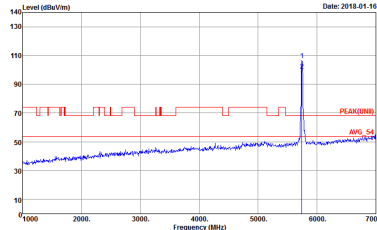
|                 |                            |                     |         |
|-----------------|----------------------------|---------------------|---------|
| Test Engineer : | Lance Chiang and Yun Huang | Temperature :       | 22~24°C |
|                 |                            | Relative Humidity : | 52~58%  |

### Note symbol

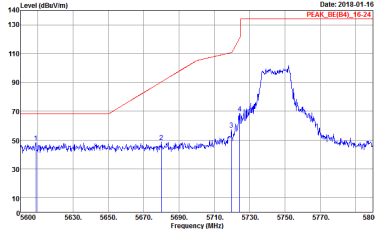
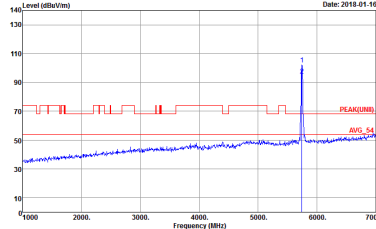
|    |                       |
|----|-----------------------|
| -L | Low channel location  |
| -R | High channel location |

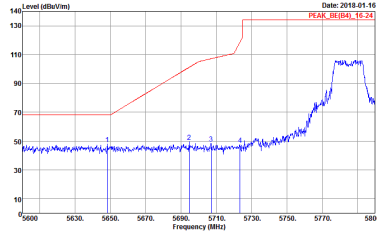
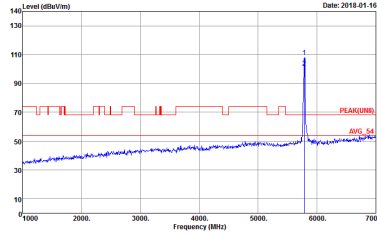
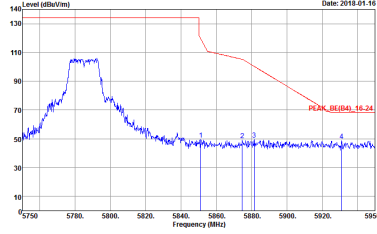


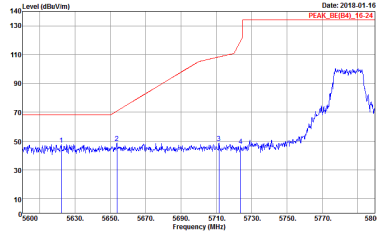
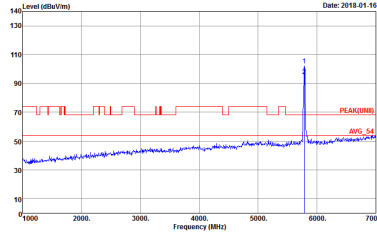
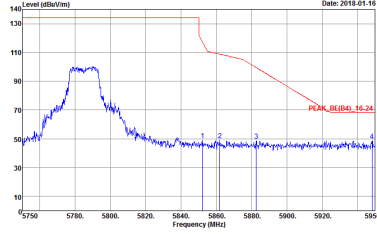
Band 4 - 5725~5850MHz  
WIFI 802.11a (Band Edge @ 3m)

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH149 5745MHz                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                             |
| 1    | Horizontal                                                                                                                                                                                                                                                                                        | Fundamental                                                                                                                                                                                                                                                                                 |
| Peak | <div><p>Site : 03CH10-HY<br/>Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF HORIZONTAL<br/>Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Project : 7D2018-03<br/>Mode : 27<br/>Setting : 7/0</p></div> | <div><p>Site : 03CH10-HY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/>Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Project : 7D2018-03<br/>Mode : 27<br/>Setting : 7/0</p></div> |

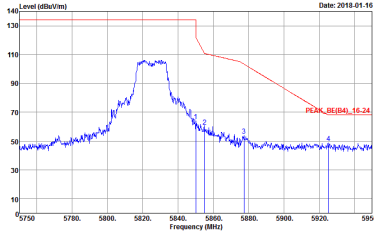
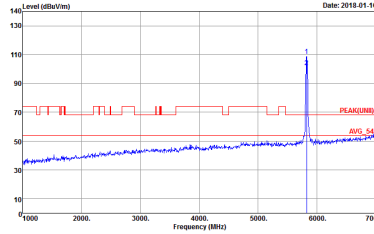


| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                    |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH149 5745MHz                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                    |
| 1    | Vertical                                                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                                                        |
| Peak | <div><p>Site : 03CH10-HY<br/>Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 27<br/>Setting : 7/0</p></div> | <div><p>Site : 03CH10-HY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 27<br/>Setting : 7/0</p></div> |
|      |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                    |

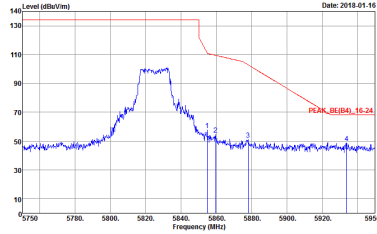
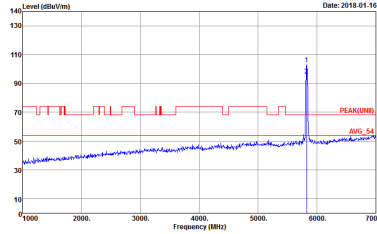
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH157 5785MHz                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                          |
| 1    | Horizontal                                                                                                                                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                                                                                                                              |
| Peak |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 28<br/>           Setting : 7/1         </p>   |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK(UNII) 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 28<br/>           Setting : 7/1         </p> |
| Peak |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 28<br/>           Setting : 7/1         </p> | Left blank                                                                                                                                                                                                                                                                                                               |

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH157 5785MHz                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                        |
| 1    | Vertical                                                                                                                                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                                                                                                                            |
| Peak |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 28<br/>           Setting : 7/1         </p>   |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 28<br/>           Setting : 7/1         </p> |
|      |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 28<br/>           Setting : 7/1         </p> | Left blank                                                                                                                                                                                                                                                                                                             |



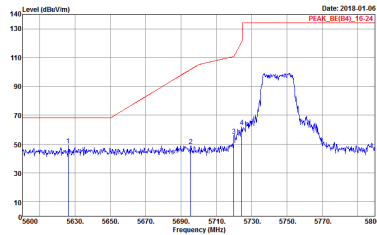
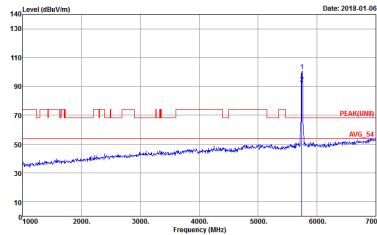
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH165 5825MHz                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                          |
| 1    | Horizontal                                                                                                                                                                                                                                                     | Fundamental                                                                                                                                                                                                                                              |
| Peak | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 29<br/>Setting : 7/2</p></div> | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK(UNII) 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 29<br/>Setting : 7/2</p></div> |



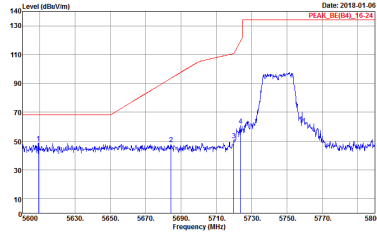
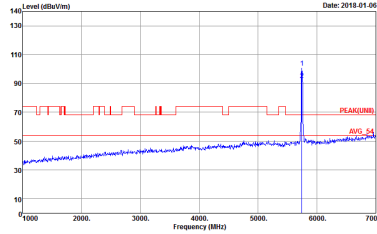
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH165 5825MHz                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                        |
| 1    | Vertical                                                                                                                                                                                                                                                     | Fundamental                                                                                                                                                                                                                                            |
| Peak | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 29<br/>Setting : 7/2</p></div> | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK(UNII) 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 29<br/>Setting : 7/2</p></div> |

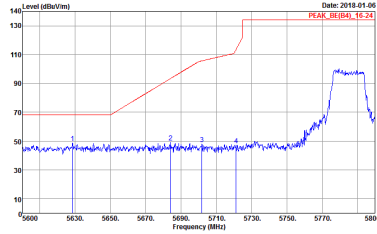
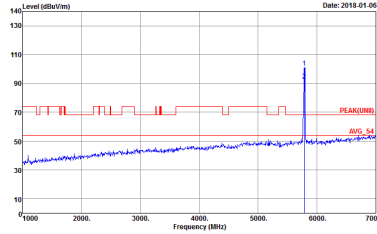
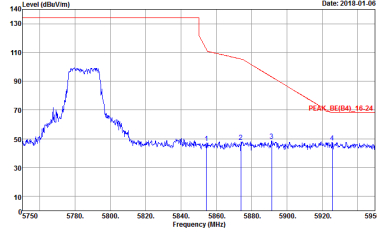


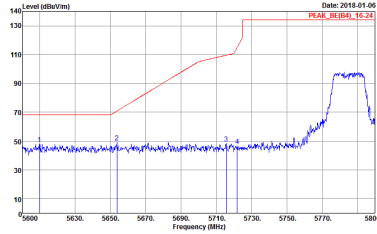
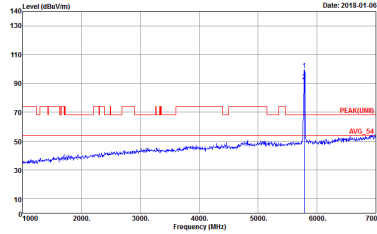
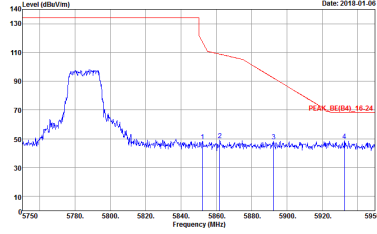
**Band 4 5725~5850MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH149 5745MHz                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                               |
| 1    | Horizontal                                                                                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                                                                                   |
| Peak | <div><p>Site : 03CH10-HY<br/>Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF HORIZONTAL<br/>Detector : RBW:1000.000KHz VSW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 30</p></div> | <div><p>Site : 03CH10-HY<br/>Condition : PEAK(UNIT) 3m HORN 91200-HF HORIZONTAL<br/>Detector : RBW:1000.000KHz VSW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 30</p></div> |

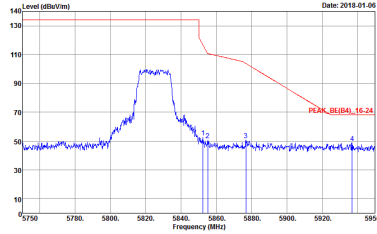
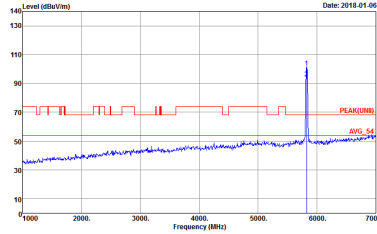


| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                    |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH149 5745MHz                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                    |
| 1    | Vertical                                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                                        |
| Peak | <div><p>Site : 03CH10-I-VY<br/>Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 30</p></div> | <div><p>Site : 03CH10-I-VY<br/>Condition : PEAK(UNII) 3m HORN 9120D-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 30</p></div> |

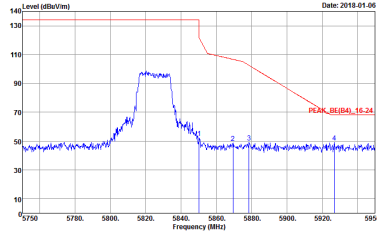
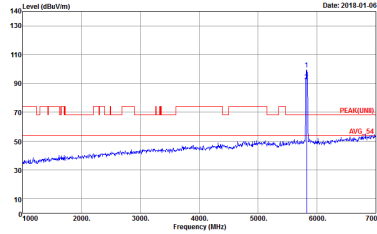
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                  |                                                                                                                                                                                                                             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH157 5785MHz                                                                                                                                                                                                          |                                                                                                                                                                                                                             |
| 1    | Horizontal                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                 |
| Peak |  <p>Site : 03CH10-HY<br/>Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 31</p>   |  <p>Site : 03CH10-HY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 31</p> |
|      |  <p>Site : 03CH10-HY<br/>Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 31</p> | Left blank                                                                                                                                                                                                                  |

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH157 5785MHz                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                    |
| 1    | Vertical                                                                                                                                                                                                                                                                                                                                                  | Fundamental                                                                                                                                                                                                                                                                                                                                        |
| Peak |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(04)_15-24 3m HORN 91200-HF VERTICAL<br/>           RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 31         </p>   |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK(FUNDI) 3m HORN 91200-HF VERTICAL<br/>           RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 31         </p> |
|      |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(04)_15-24 3m HORN 91200-HF VERTICAL<br/>           RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 31         </p> | Left blank                                                                                                                                                                                                                                                                                                                                         |

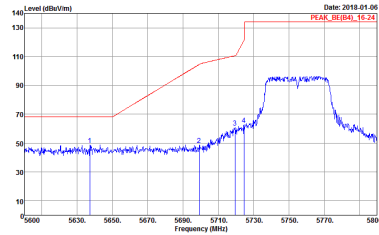
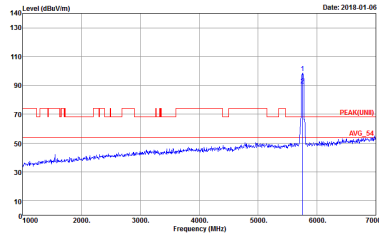
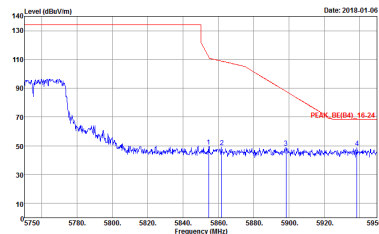


| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH165 5825MHz                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                      |
| 1    | Horizontal                                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                                          |
| Peak | <div><p>Site : 03CH10-I-VY<br/>Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 32</p></div> | <div><p>Site : 03CH10-I-VY<br/>Condition : PEAK(UNII) 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 32</p></div> |

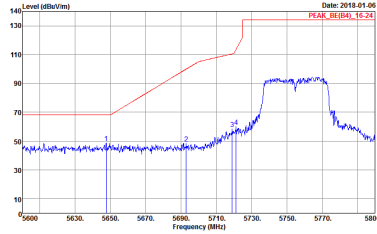
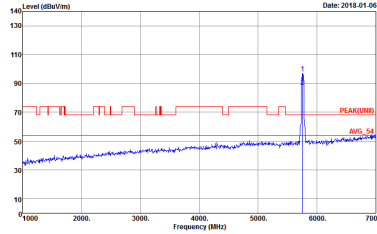
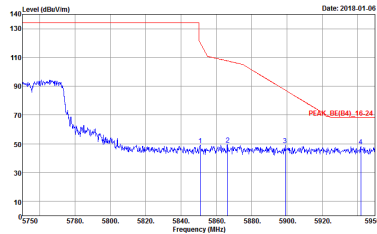


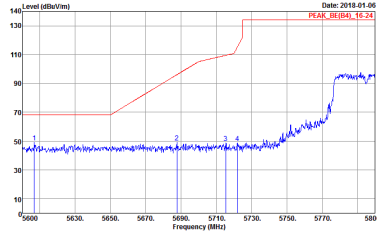
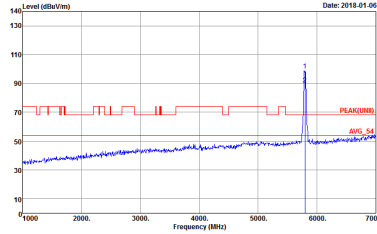
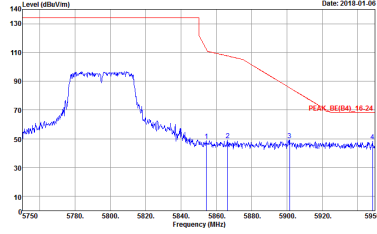
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                   |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH165 5825MHz                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                   |
| 1    | Vertical                                                                                                                                                                                                                                                                                | Fundamental                                                                                                                                                                                                                                                                       |
| Peak | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 32</p></div> | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK(UNII) 3m HORN 9120D-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 32</p></div> |

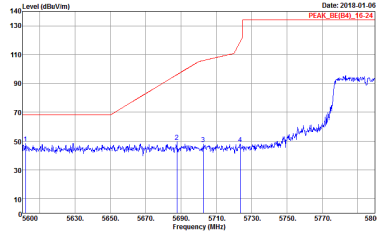
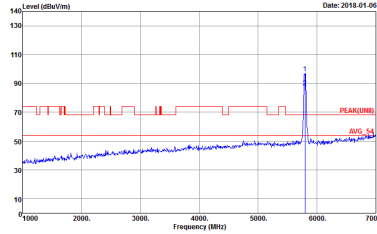
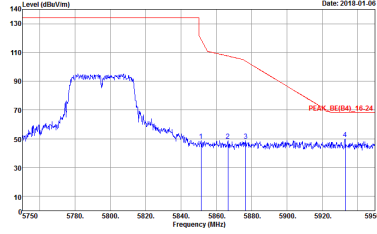
**Band 4 5725~5850MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                      |                                                                                                                                                                                                                                 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH151 5755MHz                                                                                                                                                                                                              |                                                                                                                                                                                                                                 |
| 1    | Horizontal                                                                                                                                                                                                                              | Fundamental                                                                                                                                                                                                                     |
| Peak |  <p>Site : 03CH10-HY<br/> Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF HORIZONTAL<br/> Detector : Peak<br/> Project : 7D2018-03<br/> Mode : 33</p>   |  <p>Site : 03CH10-HY<br/> Condition : PEAK(UNIT) 3m HORN 91200-HF HORIZONTAL<br/> Detector : Peak<br/> Project : 7D2018-03<br/> Mode : 33</p> |
|      |  <p>Site : 03CH10-HY<br/> Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF HORIZONTAL<br/> Detector : Peak<br/> Project : 7D2018-03<br/> Mode : 33</p> | Left blank                                                                                                                                                                                                                      |



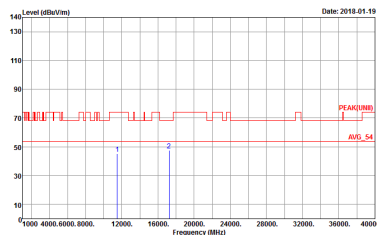
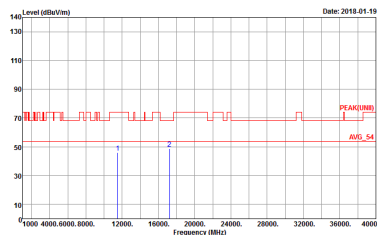
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                  |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH151 5755MHz                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                  |
| 1    | Vertical                                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                                      |
| Peak | <div><p>Site : 03CH10-HY<br/>Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 33</p></div>   | <div><p>Site : 03CH10-HY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 33</p></div> |
| Peak | <div><p>Site : 03CH10-HY<br/>Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 33</p></div> | Left blank                                                                                                                                                                                                                                                                       |

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH159 5795MHz                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                             |
| 1    | Horizontal                                                                                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                                                                                 |
| Peak |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 34         </p>   |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 34         </p> |
|      |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 34         </p> | Left blank                                                                                                                                                                                                                                                                                  |

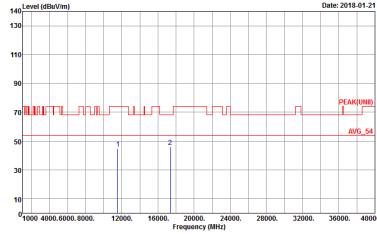
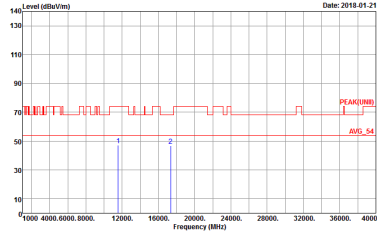
| WIFI | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                           |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH159 5795MHz                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                           |
| 1    | Vertical                                                                                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                                                                               |
| Peak |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 34         </p>   |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 34         </p> |
| Peak |  <p>           Site : 03CH10-HY<br/>           Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 7D2018-03<br/>           Mode : 34         </p> | Left blank                                                                                                                                                                                                                                                                                |



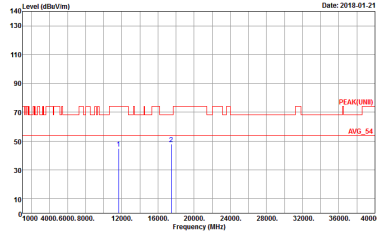
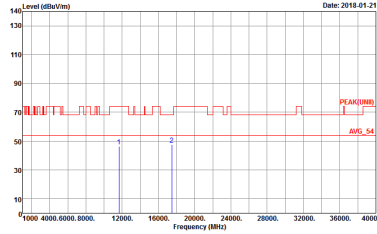
Band 4 - 5725~5850MHz  
WIFI 802.11a (Harmonic @ 3m)

| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                                                                          |                                                                                                                                                                                                                           |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH149 5745MHz                                                                                                                                                                                                      |                                                                                                                                                                                                                           |
| 1            | Horizontal                                                                                                                                                                                                                 | Vertical                                                                                                                                                                                                                  |
| Peak<br>Avg. |  <p>Site : 03CH10-HY<br/>Condition : PEAK(UNII) 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 27</p> |  <p>Site : 03CH10-HY<br/>Condition : PEAK(UNII) 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 27</p> |
|              |                                                                                                                                                                                                                            |                                                                                                                                                                                                                           |

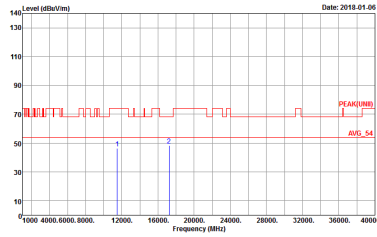
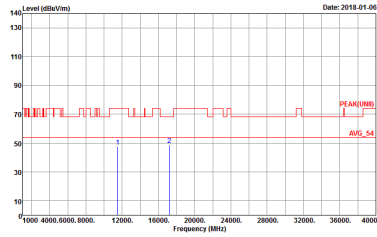


| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                                                                           |                                                                                                                                                                                                                            |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH157 5785MHz                                                                                                                                                                                                       |                                                                                                                                                                                                                            |
| 1            | Horizontal                                                                                                                                                                                                                  | Vertical                                                                                                                                                                                                                   |
| Peak<br>Avg. |  <p>Site : 03CH10-IHV<br/>Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 28</p> |  <p>Site : 03CH10-IHV<br/>Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 28</p> |
|              |                                                                                                                                                                                                                             |                                                                                                                                                                                                                            |

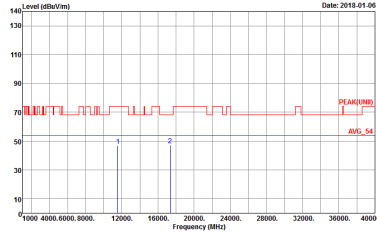
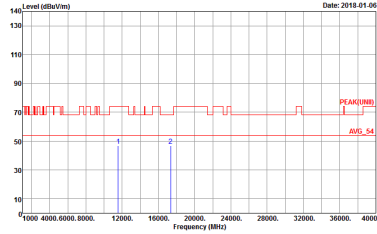


| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                                                                                     |                                                                                                                                                                                                                                      |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH165 5825MHz                                                                                                                                                                                                                 |                                                                                                                                                                                                                                      |
| 1            | Horizontal                                                                                                                                                                                                                            | Vertical                                                                                                                                                                                                                             |
| Peak<br>Avg. | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 29</p></div> | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 29</p></div> |
|              |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                      |

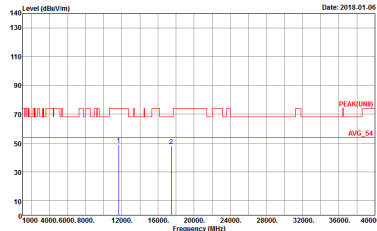
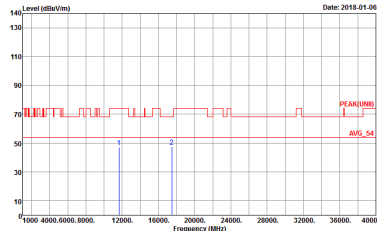
**Band 4 5725~5850MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI                           | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                                                                                |                                                                                                                                                                                                                                 |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT                            | 802.11n HT20 CH149 5745MHz                                                                                                                                                                                                       |                                                                                                                                                                                                                                 |
| 1                              | Horizontal                                                                                                                                                                                                                       | Vertical                                                                                                                                                                                                                        |
| <b>Peak</b><br><br><b>Avg.</b> |  <p> Site : 03CH10-HY<br/> Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/> Detector : Peak<br/> Project : 7D2018-03<br/> Mode : 30 </p> |  <p> Site : 03CH10-HY<br/> Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/> Detector : Peak<br/> Project : 7D2018-03<br/> Mode : 30 </p> |



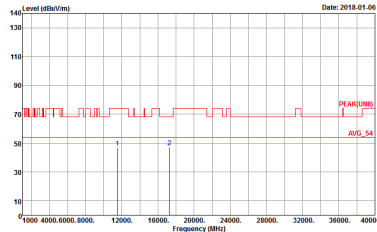
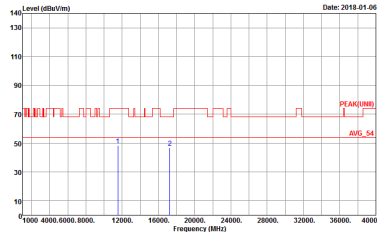
| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                                                                                      |                                                                                                                                                                                                                                       |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH157 5785MHz                                                                                                                                                                                                             |                                                                                                                                                                                                                                       |
| 1            | Horizontal                                                                                                                                                                                                                             | Vertical                                                                                                                                                                                                                              |
| Peak<br>Avg. | <div><p>Site : 03CH10-I-VY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 31</p></div> | <div><p>Site : 03CH10-I-VY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 31</p></div> |
|              |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                       |



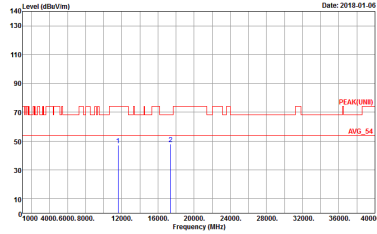
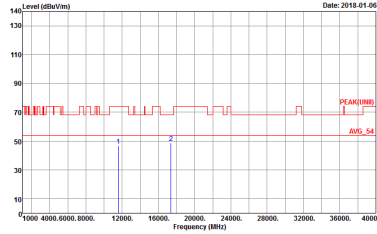
| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                                                                                    |                                                                                                                                                                                                                                     |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH165 5825MHz                                                                                                                                                                                                           |                                                                                                                                                                                                                                     |
| 1            | Horizontal                                                                                                                                                                                                                           | Vertical                                                                                                                                                                                                                            |
| Peak<br>Avg. | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK(UNB) 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 32</p></div> | <div><p>Site : 03CH10-IHV<br/>Condition : PEAK(UNB) 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 32</p></div> |
|              |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                     |



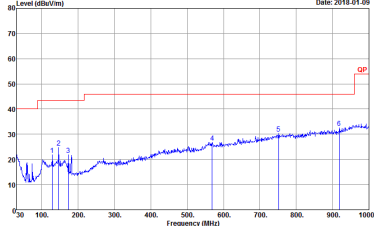
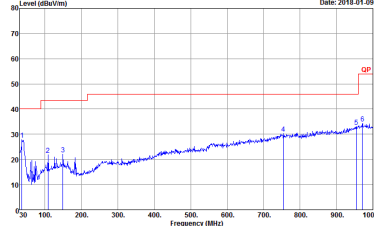
Band 4 5725~5850MHz  
WIFI 802.11n HT40 (Harmonic @ 3m)

| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                                                                                    |                                                                                                                                                                                                                                     |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH151 5755MHz                                                                                                                                                                                                           |                                                                                                                                                                                                                                     |
| 1            | Horizontal                                                                                                                                                                                                                           | Vertical                                                                                                                                                                                                                            |
| Peak<br>Avg. | <div><p>Site : 03CH10-HY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 33</p></div> | <div><p>Site : 03CH10-HY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 33</p></div> |



| WIFI         | Band 4 5725~5850MHz Harmonic @ 3m                                                                                                                                                                                                      |                                                                                                                                                                                                                                       |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH159 5795MHz                                                                                                                                                                                                             |                                                                                                                                                                                                                                       |
| 1            | Horizontal                                                                                                                                                                                                                             | Vertical                                                                                                                                                                                                                              |
| Peak<br>Avg. | <div><p>Site : 03CH10-I-VY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 34</p></div> | <div><p>Site : 03CH10-I-VY<br/>Condition : PEAK(UNII) 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 7D2018-03<br/>Mode : 34</p></div> |
|              |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                       |

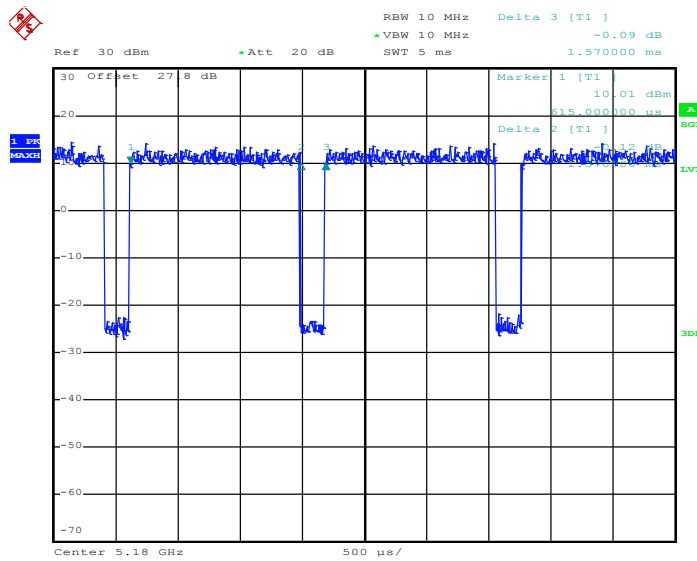
**Emission below 1GHz**  
**5GHz WIFI 802.11n HT40 (LF)**

| WIFI                 | 5GHz 5725~5850MHz                                                                                                                                                                                                          |                                                                                                                                                                                                                           |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT                  | 802.11n HT40 LF                                                                                                                                                                                                            |                                                                                                                                                                                                                           |
| 1                    | Horizontal                                                                                                                                                                                                                 | Vertical                                                                                                                                                                                                                  |
| <b>QP /<br/>Peak</b> |  <p> Site : 03CH10-HY<br/> Condition : QP 3m BT-LOG 6111D-LF HORIZONTAL<br/> Detector : Peak<br/> Project : 7D2018-03<br/> Mode : 3S </p> |  <p> Site : 03CH10-HY<br/> Condition : QP 3m BT-LOG 6111D-LF VERTICAL<br/> Detector : Peak<br/> Project : 7D2018-03<br/> Mode : 3S </p> |
|                      |                                                                                                                                                                                                                            |                                                                                                                                                                                                                           |

## Appendix E. Duty Cycle Plots

| Band              | Duty Cycle(%) | T(us)   | 1/T(kHz) | VBW Setting | Duty Factor(dB) |
|-------------------|---------------|---------|----------|-------------|-----------------|
| 802.11a           | 87.26         | 1370.00 | 0.73     | 1kHz        | 0.59            |
| 5GHz 802.11n HT20 | 86.49         | 1280.00 | 0.78     | 1kHz        | 0.63            |
| 5GHz 802.11n HT40 | 89.66         | 1820.00 | 0.55     | 1kHz        | 0.47            |

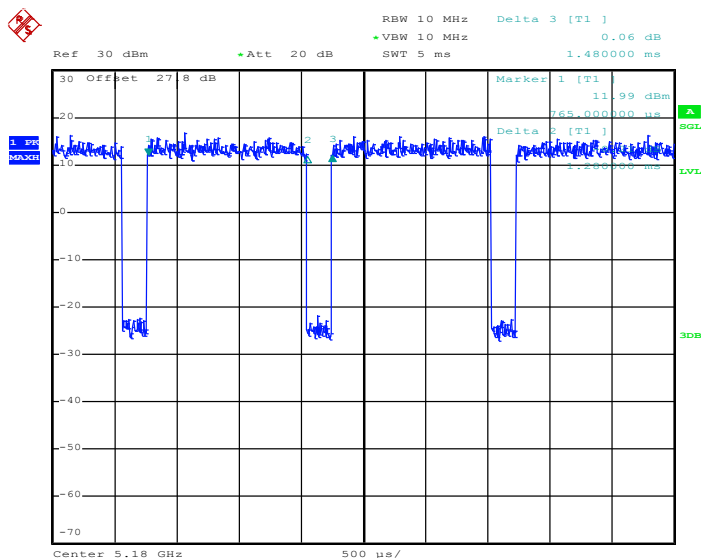
### 802.11a



Date: 4.JAN.2018 15:02:24

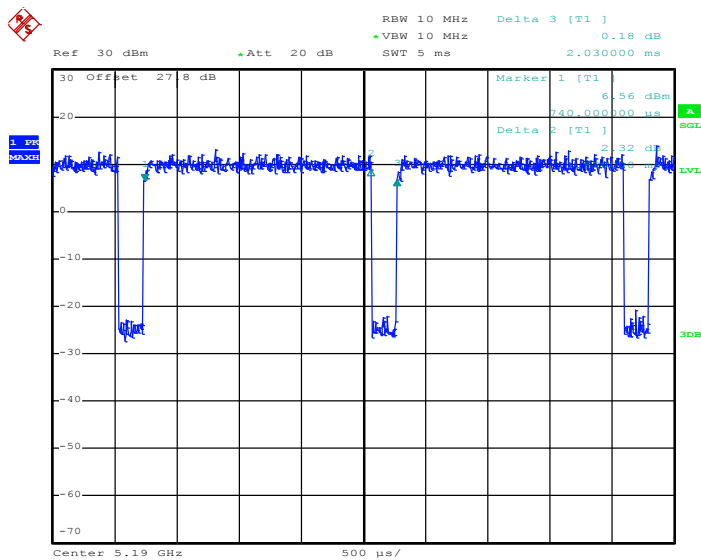


### 802.11n HT20



Date: 4.JAN.2018 15:50:44

### 802.11n HT40



Date: 4.JAN.2018 16:27:32