



# FCC RADIO TEST REPORT

**FCC ID** : UDX-60053020  
**Equipment** : LTE & Wi-Fi Router  
**Brand Name** : CISCO  
**Model Name** : Z3C-HW-NA  
**Applicant** : Cisco Systems, Inc.  
170 West Tasman Drive, San Jose, CA 95134  
**Standard** : FCC Part 15 Subpart E §15.407

The product was received on Apr. 27, 2018 and testing was started from May 09, 2018 and completed on May 25, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

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

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



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## History of this test report

| Report No.  | Version | Description             | Issued Date   |
|-------------|---------|-------------------------|---------------|
| FR811724-04 | 01      | Initial issue of report | Dec. 25, 2020 |
|             |         |                         |               |
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|             |         |                         |               |

## Summary of Test Result

| Report Clause | Ref Std. Clause     | Test Items                             | Result (PASS/FAIL) | Remark                                    |
|---------------|---------------------|----------------------------------------|--------------------|-------------------------------------------|
| 3.1           | 15.403(i)           | 26dB Bandwidth                         | Pass               | -                                         |
| 3.1           | 2.1049              | 99% Occupied Bandwidth                 | Reporting only     | -                                         |
| 3.2           | 15.407(a)           | Maximum Conducted Output Power         | Pass               | -                                         |
| 3.3           | 15.407(a)           | Power Spectral Density                 | Pass               | -                                         |
| 3.4           | 15.407(b)           | Unwanted Emissions                     | Pass               | Under limit<br>1.09 dB at<br>5350.080 MHz |
| 3.5           | 15.207              | AC Conducted Emission                  | Pass               | Under limit<br>15.33 dB at<br>4.085 MHz   |
| 3.6           | 15.407(c)           | Automatically Discontinue Transmission | Pass               | -                                         |
| 3.7           | 15.203<br>15.407(a) | Antenna Requirement                    | Pass               | -                                         |

**Note:** This report is by updating SW for DFS. Since the test result is not affected by the changes, the FR811724-04 report reuse test data from the FR811724D report.

### Declaration of Conformity:

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

### Comments and Explanations:

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

**Reviewed by: Wii Chang**

**Report Producer: Lucy Wu**

# 1 General Description

## 1.1 Product Feature of Equipment Under Test

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

| Product Specification subjective to this standard |                                                                                                             |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Antenna Type                                      | WWAN: PIFA Antenna<br>WLAN<br><Ant. 1>: PIFA Antenna<br><Ant. 2>: Dipole Antenna<br>Bluetooth: PIFA Antenna |

| Antenna information |                 |                            |
|---------------------|-----------------|----------------------------|
| 5250 MHz ~ 5350 MHz | Peak Gain (dBi) | Ant. 1: 4.0<br>Ant. 2: 3.5 |
| 5470 MHz ~ 5725 MHz | Peak Gain (dBi) | Ant. 1: 4.0<br>Ant. 2: 3.5 |

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

## 1.2 Modification of EUT

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

### 1.3 Testing Location

|                           |                                                                                                                       |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Test Site</b>          | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory                                                   |
| <b>Test Site Location</b> | No.52, Huaya 1st Rd., Guishan Dist.,<br>Taoyuan City, 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. EMC & Wireless Communications Laboratory                                                                       |
| <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>                                                                                                                   |
|                           | 03CH12-HY                                                                                                                                 |

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

FCC designation No.: TW1190 and TW0007

### 1.4 Applicable Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output 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. The TAF code is not including all the FCC KDB listed without accreditation.

## 2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (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. (MHz) | Channel | Freq. (MHz) |
|---------------------------------------|------------------|-------------|---------|-------------|
| 5250-5350 MHz<br>Band 2<br>(U-NII-2A) | 52               | 5260        | 60      | 5300        |
|                                       | 54*              | 5270        | 62*     | 5310        |
|                                       | 56               | 5280        | 64      | 5320        |
|                                       | 58 <sup>#</sup>  | 5290        |         |             |
| Frequency Band                        | Channel          | Freq. (MHz) | Channel | Freq. (MHz) |
| 5470-5725 MHz<br>Band 3<br>(U-NII-2C) | 100              | 5500        | 112     | 5560        |
|                                       | 102*             | 5510        | 116     | 5580        |
|                                       | 104              | 5520        | 132     | 5660        |
|                                       | 106 <sup>#</sup> | 5530        | 134*    | 5670        |
|                                       | 108              | 5540        | 136     | 5680        |
|                                       | 110*             | 5550        | 140     | 5700        |
| Frequency Band                        | Channel          | Freq. (MHz) | Channel | Freq. (MHz) |
| Straddle Channel                      | 138 <sup>#</sup> | 5690        | 144     | 5720        |
|                                       | 142*             | 5710        |         |             |

**Note:**

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

## 2.2 Test Mode

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

### MIMO Mode

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

### TXBF Mode (Power Only)

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

| Test Cases            |                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------|
| AC Conducted Emission | Mode 1: WLAN (5GHz) Link + RJ-45 Link (LAN) + Bluetooth Link + USB Link + Adapter + Connects to the MR33 via RJ-45 |





| Ch. #    |        | Band II : 5250-5350 MHz | Band III : 5470-5725MHz |
|----------|--------|-------------------------|-------------------------|
|          |        | 802.11a                 | 802.11a                 |
| L        | Low    | 52                      | 100                     |
| M        | Middle | 60                      | 116                     |
| H        | High   | 64                      | 140                     |
| Straddle |        | -                       | 144                     |

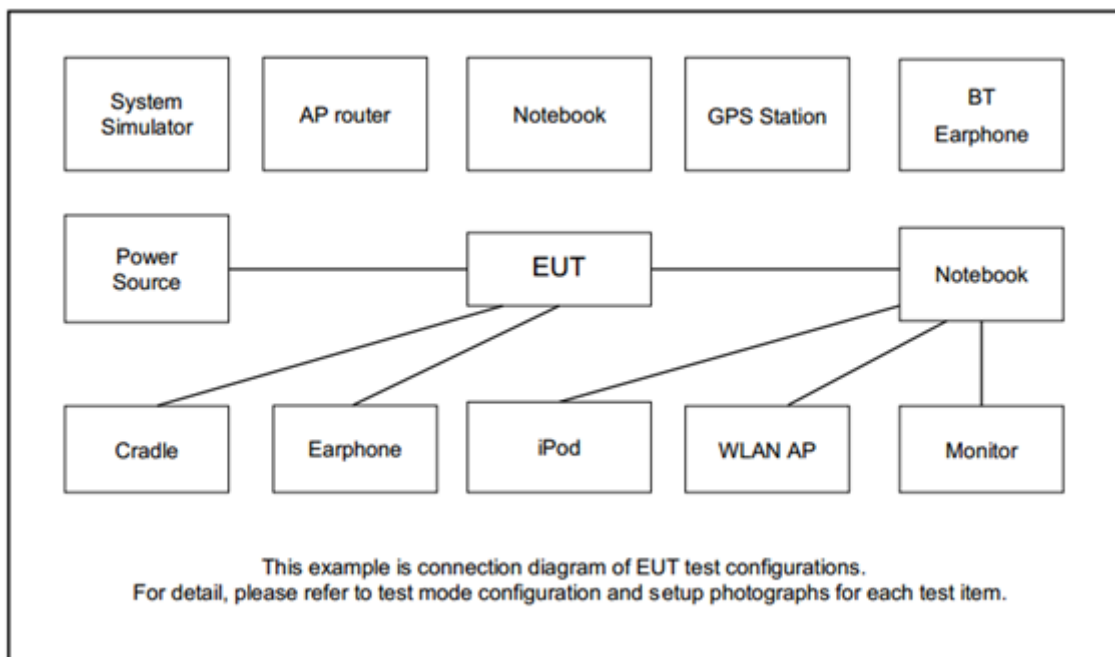
| Ch. #    |        | Band II : 5250-5350 MHz | Band III : 5470-5725MHz |
|----------|--------|-------------------------|-------------------------|
|          |        | 802.11n HT20            | 802.11n HT20            |
| L        | Low    | 52                      | 100                     |
| M        | Middle | 60                      | 116                     |
| H        | High   | 64                      | 140                     |
| Straddle |        | -                       | 144                     |

| Ch. #    |        | Band II : 5250-5350 MHz | Band III : 5470-5725MHz |
|----------|--------|-------------------------|-------------------------|
|          |        | 802.11n HT40            | 802.11n HT40            |
| L        | Low    | 54                      | 102                     |
| M        | Middle | -                       | 110                     |
| H        | High   | 62                      | 134                     |
| Straddle |        | -                       | 142                     |

| Ch. #    |        | Band II : 5250-5350 MHz | Band III : 5470-5725MHz |
|----------|--------|-------------------------|-------------------------|
|          |        | 802.11ac VHT80          | 802.11ac VHT80          |
| L        | Low    | -                       | 106                     |
| M        | Middle | 58                      | -                       |
| H        | High   | -                       | -                       |
| Straddle |        | -                       | 138                     |

**Remark:** For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

## 2.3 Connection Diagram of Test System



## 2.4 Support Unit used in test configuration and system

| Item | Equipment       | Brand Name | Model Name     | FCC ID                                       | Data Cable | Power Cord                                                 |
|------|-----------------|------------|----------------|----------------------------------------------|------------|------------------------------------------------------------|
| 1.   | Notebook        | DELL       | Latitude E6320 | FCC DoC/<br>Contains FCC ID:<br>QDS-BRCM1054 | N/A        | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 2.   | Notebook        | DELL       | Latitude E3340 | FCC DoC/<br>Contains FCC ID:<br>PD97260NGU   | N/A        | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 3.   | Mobile Phone    | Apple      | Apple 6S Plus  | N/A                                          | N/A        | N/A                                                        |
| 4.   | USB Flash Drive | Kingston   | OTEG9          | N/A                                          | N/A        | N/A                                                        |
| 5.   | Cloud-Managed   | CISCO      | MR33           | N/A                                          | N/A        | N/A                                                        |

## 2.5 EUT Operation Test Setup

The RF test items and TXBF mode, 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 26dB & 99% Occupied Bandwidth Measurement

##### 3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

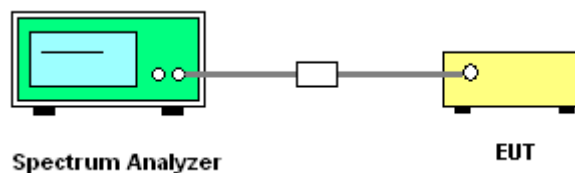
##### 3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

##### 3.1.3 Test Procedures

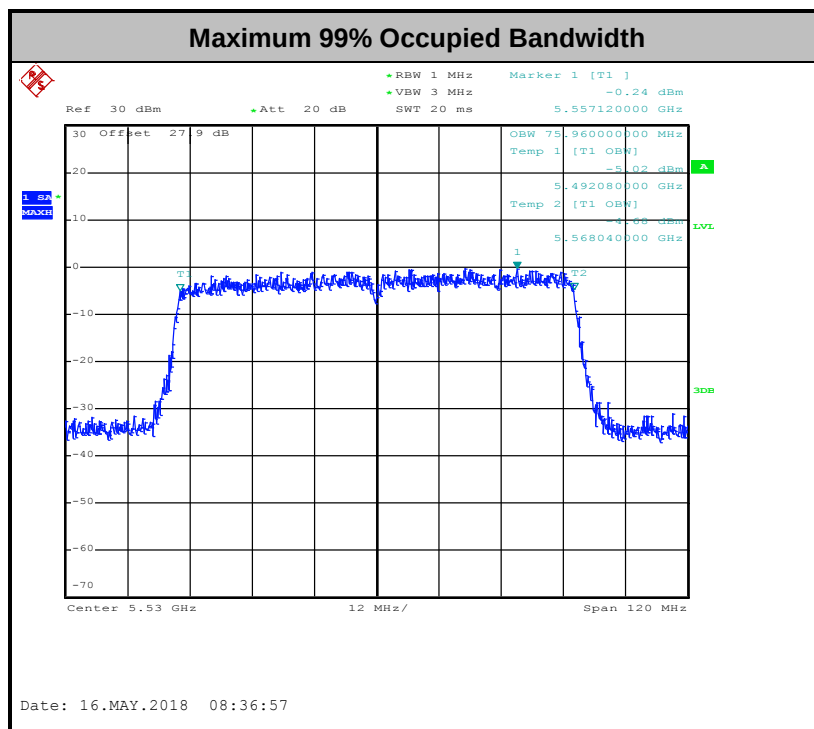
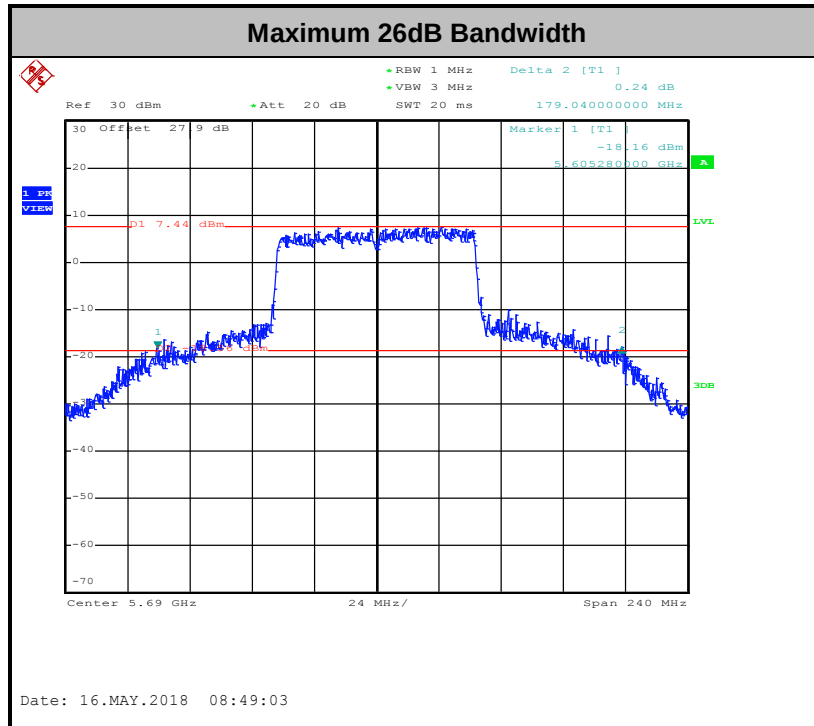
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW)  $\geq 3 * RBW$ .
8. Measure and record the results in the test report.

##### 3.1.4 Test Setup



##### 3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.



**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**

#### **<FCC 14-30 CFR 15.407>**

##### **For the 5.25–5.725 GHz bands:**

- The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

### **3.2.2 Measuring Instruments**

See list of measuring equipment 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.

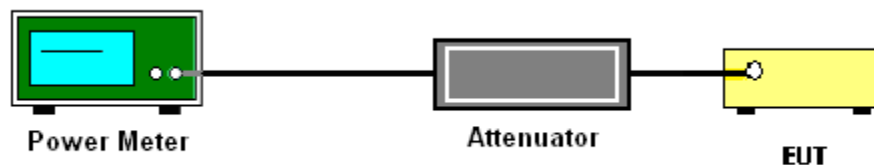
Method PM (Measurement using an RF average power meter):

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.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

Additional TXBF gain  $10 \log(N = 2)$  has offset to the CDD mode in order to show compliance for TXBF mode.

### 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**

##### **<FCC 14-30 CFR 15.407>**

##### **For the 5.25–5.725 GHz bands:**

The maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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**

See list of measuring equipment 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 #

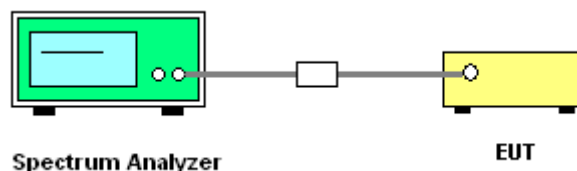
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 1 MHz.
  - Set VBW  $\geq$  3 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  $10 \log(1/x)$ , 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. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (a): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points; the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

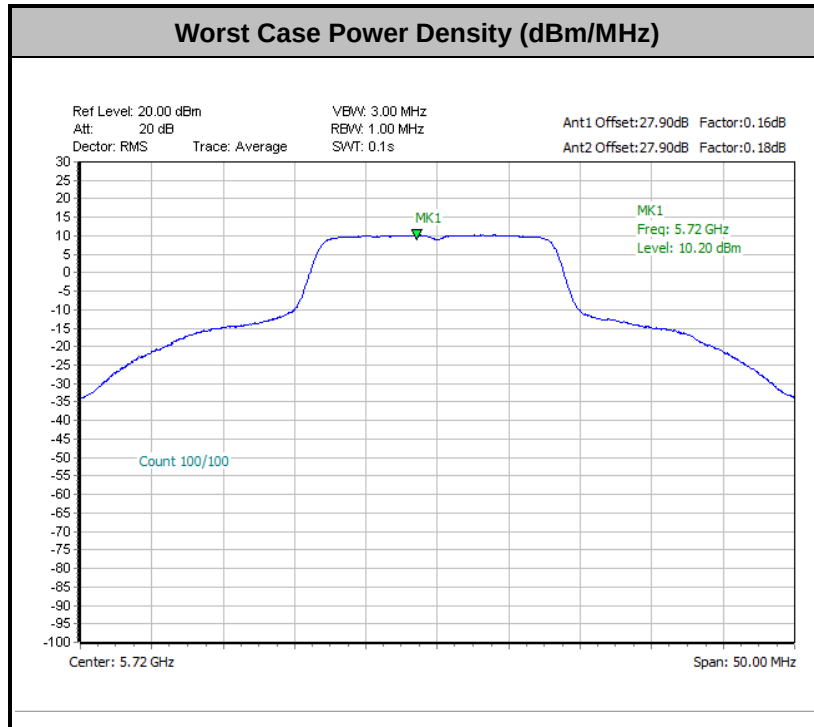
### 3.3.4 Test Setup





### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



**Note:** Average Power Density (dB) = Measured value+ Duty Factor

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

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

- (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.

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



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

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

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

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

### 3.4.2 Measuring Instruments

See list of measuring equipment 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

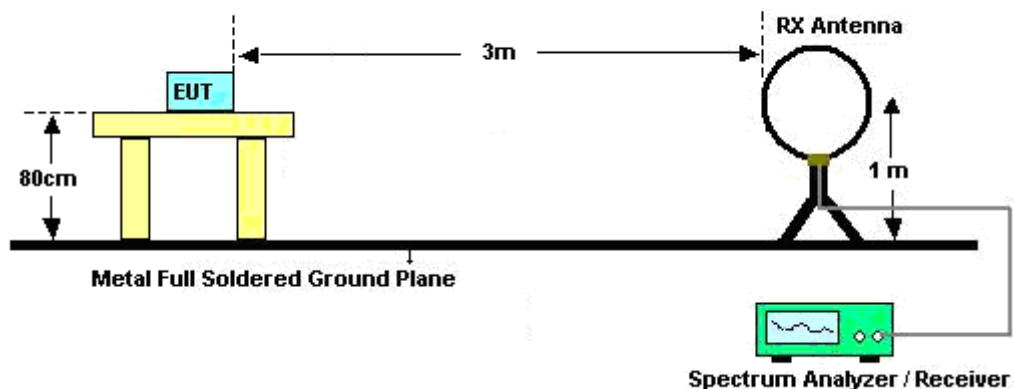
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

- 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.

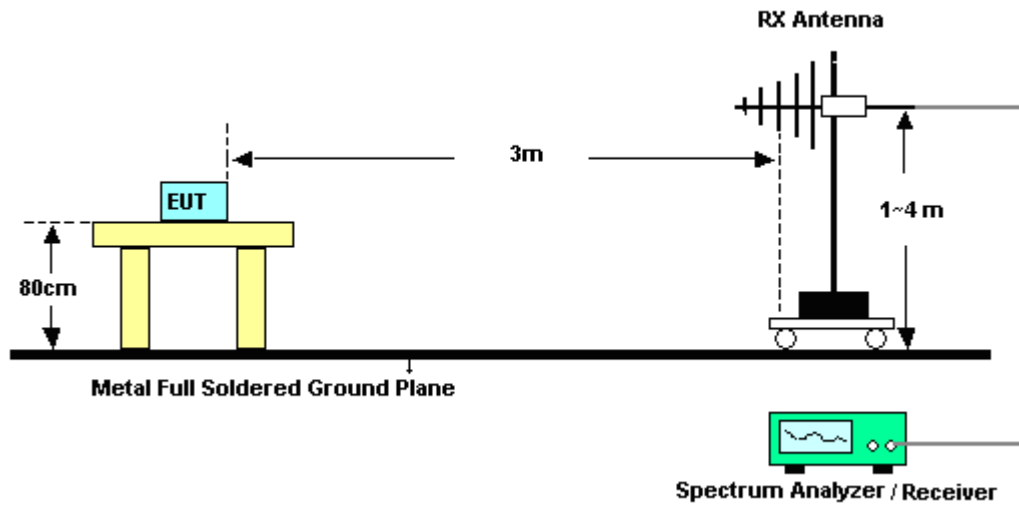
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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

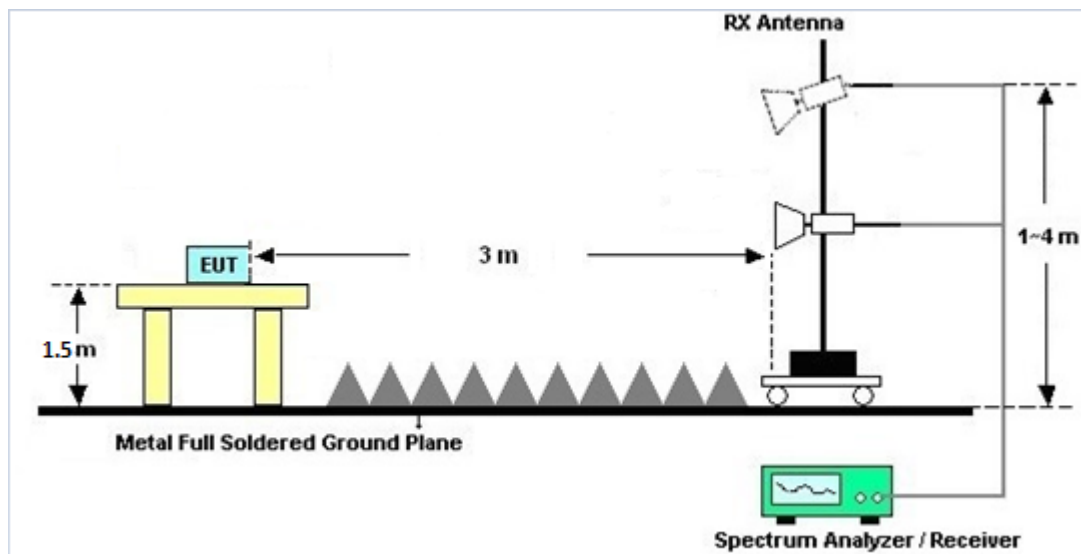
**For radiated emissions below 30MHz**



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz





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

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

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

### **3.4.6 Test Result of Radiated Spurious at 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 Radiated Spurious Emissions (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

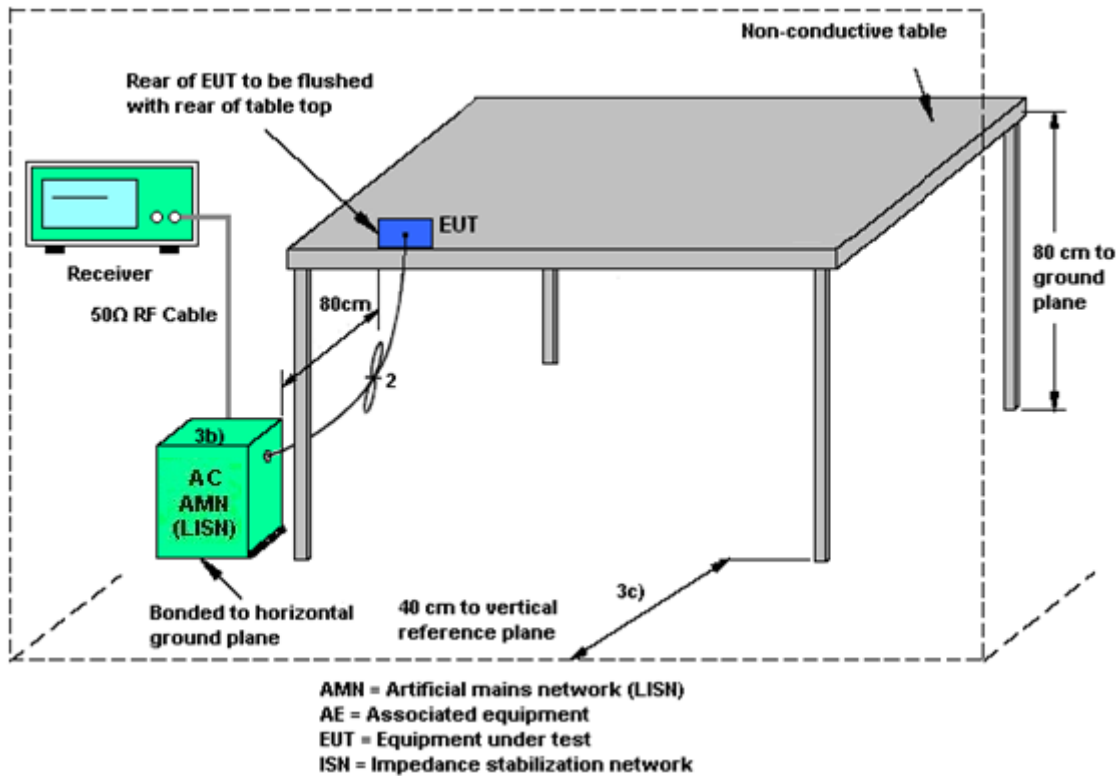
See list of measuring equipment of this test report.

#### 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**

See list of measuring equipment 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

##### <CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = GANT + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain =  $10 \log(\text{NANT}/\text{NSS}=1)$  dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for  $\text{NANT} \leq 4$ .

Directional gain may be calculated by using the formulas applicable to equal gain antennas with GANT set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain GANT is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain "DG" is calculated as following table.

|          |                 |                 | DG<br>for<br>Power<br>(dBi) | DG<br>for<br>PSD<br>(dBi) | Power<br>Limit<br>Reduction<br>(dB) | PSD<br>Limit<br>Reduction<br>(dB) |
|----------|-----------------|-----------------|-----------------------------|---------------------------|-------------------------------------|-----------------------------------|
|          | Ant. 1<br>(dBi) | Ant. 2<br>(dBi) |                             |                           |                                     |                                   |
| Band II  | 4.00            | 3.50            | 4.00                        | 6.76                      | 0.00                                | 0.76                              |
| Band III | 4.00            | 3.50            | 4.00                        | 6.76                      | 0.00                                | 0.76                              |

*Power limit reduction = Composite gain – 6dBi, ( min = 0 )*

*PSD limit reduction = Composite gain + PSD Array gain – 6dBi, ( min = 0 )*

**<TXBF Modes>**

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

$$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

$N_{SS}$  = the number of independent spatial streams of data;

$N_{ANT}$  = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$  if the  $k$ th antenna is being fed by spatial stream  $j$ , or zero if it is not;  
 $G_k$  is the gain in dBi of the  $k$ th antenna.

The EUT supports beamforming for 802.11ac modes.

The directional gain calculation is following F)2)e)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain "DG" is calculated as following table.

|                 |       |       | DG    | DG    | Power     | PSD       |
|-----------------|-------|-------|-------|-------|-----------|-----------|
|                 |       |       | for   | for   | Limit     | Limit     |
|                 | Ant 1 | Ant 2 | Power | PSD   | Reduction | Reduction |
|                 | (dBi) | (dBi) | (dBi) | (dBi) | (dB)      | (dB)      |
| <b>Band II</b>  | 4.00  | 3.50  | 6.76  | 6.76  | 0.76      | 0.76      |
| <b>Band III</b> | 4.00  | 3.50  | 6.76  | 6.76  | 0.76      | 0.76      |

$Power\ Limit\ Reduction = DG(Power) - 6dBi, (min = 0)$

$PSD\ Limit\ Reduction = DG(PSD) - 6dBi, (min = 0)$



## 4 List of Measuring Equipment

| Instrument            | Brand Name            | Model No.                            | Serial No.     | Characteristics                     | Calibration Date | Test Date                      | Due Date      | Remark                   |
|-----------------------|-----------------------|--------------------------------------|----------------|-------------------------------------|------------------|--------------------------------|---------------|--------------------------|
| Power Meter           | Anritsu               | ML2495A                              | 0932001        | N/A                                 | Sep. 26, 2017    | May 11, 2018~<br>May 18, 2018  | Sep. 25, 2018 | Conducted<br>(TH05-HY)   |
| Power Sensor          | Anritsu               | MA2411B                              | 0846202        | 300MHz~40GHz<br>z                   | Sep. 26, 2017    | May 11, 2018~<br>May 18, 2018  | Sep. 25, 2018 | Conducted<br>(TH05-HY)   |
| Spectrum Analyzer     | Rohde & Schwarz       | FSP30                                | 101067         | 9kHz ~ 30GHz                        | Nov. 13, 2017    | May 11, 2018~<br>May 18, 2018  | Nov. 12, 2018 | Conducted<br>(TH05-HY)   |
| Switch Box & RF Cable | Burgeon               | ETF-058                              | EC130048<br>4  | N/A                                 | Mar. 01, 2018    | May 11, 2018~<br>May 18, 2018  | Feb. 28, 2019 | Conducted<br>(TH05-HY)   |
| AC Power Source       | ChainTek              | APC-1000W                            | N/A            | N/A                                 | N/A              | May 25, 2018                   | N/A           | Conduction<br>(CO05-HY)  |
| EMI Test Receiver     | Rohde & Schwarz       | ESR3                                 | 102388         | 3.6GHz                              | Dec. 08, 2017    | May 25, 2018                   | Dec. 07, 2018 | Conduction<br>(CO05-HY)  |
| LISN                  | Rohde & Schwarz       | ENV216                               | 100080         | 9kHz~30MHz                          | Nov. 30, 2017    | May 25, 2018                   | Nov. 29, 2018 | Conduction<br>(CO05-HY)  |
| Software              | Rohde & Schwarz       | EMC32<br>V10.30                      | N/A            | N/A                                 | N/A              | May 25, 2018                   | N/A           | Conduction<br>(CO05-HY)  |
| LF Cable              | HUBER +<br>SUHNER     | RG-214/U                             | LF01           | N/A                                 | Jan. 03, 2018    | May 25, 2018                   | Jan. 02, 2019 | Conduction<br>(CO05-HY)  |
| Pulse Limiter         | Rohde & Schwarz       | ESH3-Z2                              | 100851         | N/A                                 | Jan. 03, 2018    | May 25, 2018                   | Jan. 02, 2019 | Conduction<br>(CO05-HY)  |
| Amplifier             | MITEQ                 | TTA1840-35-<br>HG                    | 1871923        | 18GHz~40GHz,<br>VSWR : 2.5:1<br>max | Jul. 18, 2017    | May 09, 2018 ~<br>May 12, 2018 | Jul. 17, 2018 | Radiation<br>(03CH12-HY) |
| Spectrum Analyzer     | Keysight              | N9010A                               | MY542004<br>85 | 10Hz ~ 44GHz                        | Oct. 31, 2017    | May 09, 2018 ~<br>May 12, 2018 | Oct. 30, 2018 | Radiation<br>(03CH12-HY) |
| Bilog Antenna         | TESEQ                 | CBL6111D&0<br>0802N1D01N-<br>06      | 47020&06       | 30MHz~1GHz                          | Nov. 20, 2017    | May 09, 2018 ~<br>May 12, 2018 | Nov. 19, 2018 | Radiation<br>(03CH12-HY) |
| Loop Antenna          | Rohde & Schwarz       | HFH2-Z2                              | 100488         | 9 kHz~30 MHz                        | Nov. 23, 2017    | May 09, 2018 ~<br>May 12, 2018 | Nov. 22, 2018 | Radiation<br>(03CH12-HY) |
| EMI Test Receiver     | Rohde & Schwarz       | ESU26                                | 100390         | 20Hz~26.5GHz                        | Dec. 25, 2017    | May 09, 2018 ~<br>May 12, 2018 | Dec. 24, 2018 | Radiation<br>(03CH12-HY) |
| Horn Antenna          | SCHWARZBE<br>CK       | BBHA 9120D                           | 9120D-132<br>8 | 1GHz ~ 18GHz                        | Oct. 20, 2017    | May 09, 2018 ~<br>May 12, 2018 | Oct. 19, 2018 | Radiation<br>(03CH12-HY) |
| Amplifier             | Sonoma-Instru<br>ment | 310 N                                | 187282         | 9KHz~1GHz                           | Jan. 19, 2018    | May 09, 2018 ~<br>May 12, 2018 | Jan. 18, 2020 | Radiation<br>(03CH12-HY) |
| Preamplifier          | Keysight              | 83017A                               | MY532701<br>48 | 1GHz~26.5GHz                        | Jan. 15, 2018    | May 09, 2018 ~<br>May 12, 2018 | Jan. 14, 2019 | Radiation<br>(03CH12-HY) |
| Filter                | Wainwright            | WLKS1200-1<br>2SS                    | SN2            | 1.2G Low Pass                       | Jul. 17, 2017    | May 09, 2018 ~<br>May 12, 2018 | Jul. 16, 2018 | Radiation<br>(03CH12-HY) |
| Filter                | Woken                 | WHKX8-5272.<br>5-6750-18000<br>-40ST | SN2            | 6.75G Highpass                      | Jul. 17, 2017    | May 09, 2018 ~<br>May 12, 2018 | Jul. 16, 2018 | Radiation<br>(03CH12-HY) |
| Antenna Mast          | EMEC                  | AM-BS-4500-<br>B                     | N/A            | 1m~4m                               | N/A              | May 09, 2018 ~<br>May 12, 2018 | N/A           | Radiation<br>(03CH12-HY) |
| Turn Table            | EMEC                  | TT2000                               | N/A            | 0~360 Degree                        | N/A              | May 09, 2018 ~<br>May 12, 2018 | N/A           | Radiation<br>(03CH12-HY) |



| Instrument           | Brand Name     | Model No.                  | Serial No.  | Characteristics | Calibration Date | Test Date                   | Due Date      | Remark                |
|----------------------|----------------|----------------------------|-------------|-----------------|------------------|-----------------------------|---------------|-----------------------|
| SHF-EHF Horn Antenna | SCHWARZBECK    | BBHA 9170                  | BBHA9170584 | 18GHz ~ 40GHz   | Nov. 27, 2017    | May 09, 2018 ~ May 12, 2018 | Nov. 26, 2018 | Radiation (03CH12-HY) |
| Preamplifier         | MITEQ          | AMF-7D-0010<br>1800-30-10P | 1590074     | 1GHz~18GHz      | May 22, 2017     | May 09, 2018 ~ May 12, 2018 | May 21, 2018  | Radiation (03CH12-HY) |
| Software             | Audix          | E3<br>6.2009-8-24          | RK-000989   | N/A             | N/A              | May 09, 2018 ~ May 12, 2018 | N/A           | Radiation (03CH12-HY) |
| RF Cable             | HUBER + SUHNER | SUCOFLEX 126E              | 0058/126E   | 30M-18G         | Mar. 14, 2018    | May 09, 2018 ~ May 12, 2018 | Mar. 13, 2019 | Radiation (03CH12-HY) |
| RF Cable             | HUBER + SUHNER | SUCOFLEX 104               | MY15539/4   | 30M-18G         | Mar. 14, 2018    | May 09, 2018 ~ May 12, 2018 | Mar. 13, 2019 | Radiation (03CH12-HY) |
| RF Cable             | HUBER + SUHNER | SUCOFLEX 104               | MY36979/4   | 30M-18G         | Mar. 14, 2018    | May 09, 2018 ~ May 12, 2018 | Mar. 13, 2019 | Radiation (03CH12-HY) |
| RF Cable             | HUBER + SUHNER | SUCOFLEX 102               | 505134/2    | 30M~40GHz       | Oct. 17, 2017    | May 09, 2018 ~ May 12, 2018 | Oct. 16, 2018 | Radiation (03CH12-HY) |
| RF Cable             | HUBER + SUHNER | SUCOFLEX 102               | 800740/2    | 30M~40GHz       | Oct. 17, 2017    | May 09, 2018 ~ May 12, 2018 | Oct. 16, 2018 | Radiation (03CH12-HY) |



## 5 Uncertainty of Evaluation

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

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 2.7 |
|-------------------------------------------------------------------------|-----|

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

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.1 |
|-------------------------------------------------------------------------|-----|

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

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.2 |
|-------------------------------------------------------------------------|-----|

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

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

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

|                |                         |                    |       |    |
|----------------|-------------------------|--------------------|-------|----|
| Test Engineer: | Shiming Liu/Eason Huang | Temperature:       | 21~25 | °C |
| Test Date:     | 2018/05/11~2018/05/18   | Relative Humidity: | 51~54 | %  |



&lt;CDD Mode&gt;

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

| Band II |           |     |     |             |                     |       |                       |       |                                    |       |                                   |       |                                      |       |      |
|---------|-----------|-----|-----|-------------|---------------------|-------|-----------------------|-------|------------------------------------|-------|-----------------------------------|-------|--------------------------------------|-------|------|
| Mod.    | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) |       | 26 dB Bandwidth (MHz) |       | IC 99% Bandwidth Power Limit (dBm) |       | IC 99% Bandwidth EIRP Limit (dBm) |       | FCC 26dB Bandwidth Power Limit (dBm) |       | Note |
|         |           |     |     |             | Ant 1               | Ant 2 | Ant 1                 | Ant 2 | Ant 1                              | Ant 2 | Ant 1                             | Ant 2 | Ant 1                                | Ant 2 |      |
| 11a     | 6Mbps     | 2   | 52  | 5260        | 17.95               | 19.80 | 37.60                 | 40.30 | 23.54                              |       | 29.54                             |       | 23.98                                |       |      |
| 11a     | 6Mbps     | 2   | 60  | 5300        | 17.70               | 17.75 | 36.70                 | 39.40 | 23.48                              |       | 29.48                             |       | 23.98                                |       |      |
| 11a     | 6Mbps     | 2   | 64  | 5320        | 17.30               | 17.45 | 23.70                 | 33.55 | 23.38                              |       | 29.38                             |       | 23.98                                |       |      |
| HT20    | MCS0      | 2   | 52  | 5260        | 24.20               | 27.95 | 46.65                 | 48.70 | 23.98                              |       | 30.00                             |       | 23.98                                |       |      |
| HT20    | MCS0      | 2   | 60  | 5300        | 21.50               | 26.80 | 45.50                 | 47.70 | 23.98                              |       | 30.00                             |       | 23.98                                |       |      |
| HT20    | MCS0      | 2   | 64  | 5320        | 18.35               | 18.35 | 23.65                 | 29.15 | 23.64                              |       | 29.64                             |       | 23.98                                |       |      |
| HT40    | MCS0      | 2   | 54  | 5270        | 39.40               | 46.40 | 78.03                 | 86.77 | 23.98                              |       | 30.00                             |       | 23.98                                |       |      |
| HT40    | MCS0      | 2   | 62  | 5310        | 36.30               | 36.20 | 40.68                 | 41.04 | 23.98                              |       | 30.00                             |       | 23.98                                |       |      |
| VHT80   | MCS0      | 2   | 58  | 5290        | 75.84               | 75.84 | 84.48                 | 83.52 | 23.98                              |       | 30.00                             |       | 23.98                                |       |      |

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

| FCC Band II |           |     |     |             |                  |       |                               |       |       |                                 |       |          |       |                        |           |
|-------------|-----------|-----|-----|-------------|------------------|-------|-------------------------------|-------|-------|---------------------------------|-------|----------|-------|------------------------|-----------|
| Mod.        | Data Rate | NTx | CH. | Freq. (MHz) | Duty Factor (dB) |       | Average Conducted Power (dBm) |       |       | FCC Conducted Power Limit (dBm) |       | DG (dBi) |       | EIRP Power Limit (dBm) | Pass/Fail |
|             |           |     |     |             | Ant 1            | Ant 2 | Ant 1                         | Ant 2 | SUM   | Ant 1                           | Ant 2 | Ant 1    | Ant 2 |                        |           |
| 11a         | 6Mbps     | 2   | 52  | 5260        | 0.16             | 0.18  | 19.09                         | 19.08 | 22.10 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| 11a         | 6Mbps     | 2   | 60  | 5300        | 0.16             | 0.18  | 19.35                         | 19.28 | 22.33 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| 11a         | 6Mbps     | 2   | 64  | 5320        | 0.16             | 0.18  | 16.37                         | 16.90 | 19.66 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT20        | MCS0      | 2   | 52  | 5260        | 0.10             | 0.10  | 19.33                         | 19.30 | 22.33 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT20        | MCS0      | 2   | 60  | 5300        | 0.10             | 0.10  | 19.20                         | 19.29 | 22.26 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT20        | MCS0      | 2   | 64  | 5320        | 0.10             | 0.10  | 15.63                         | 16.00 | 18.83 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT40        | MCS0      | 2   | 54  | 5270        | 0.18             | 0.18  | 19.03                         | 19.08 | 22.06 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT40        | MCS0      | 2   | 62  | 5310        | 0.18             | 0.18  | 13.74                         | 14.00 | 16.88 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT20       | MCS0      | 2   | 52  | 5260        | 0.10             | 0.10  | 19.30                         | 19.22 | 22.27 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT20       | MCS0      | 2   | 60  | 5300        | 0.10             | 0.10  | 19.13                         | 19.20 | 22.18 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT20       | MCS0      | 2   | 64  | 5320        | 0.10             | 0.10  | 15.60                         | 15.93 | 18.78 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT40       | MCS0      | 2   | 54  | 5270        | 0.18             | 0.14  | 19.01                         | 18.99 | 22.01 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT40       | MCS0      | 2   | 62  | 5310        | 0.18             | 0.14  | 13.53                         | 13.94 | 16.75 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT80       | MCS0      | 2   | 58  | 5290        | 0.33             | 0.31  | 11.66                         | 11.74 | 14.71 | 23.98                           |       | 4.00     |       | 30                     | Pass      |

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

| Band II |           |     |     |             |                  |       |                                 |       |       |                             |       |          |       |      |            |
|---------|-----------|-----|-----|-------------|------------------|-------|---------------------------------|-------|-------|-----------------------------|-------|----------|-------|------|------------|
| Mod.    | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) |       | Average Power Density (dBm/MHz) |       |       | Average PSD Limit (dBm/MHz) |       | DG (dBi) |       |      | Pass /Fail |
|         |           |     |     |             | Ant 1            | Ant 2 | Ant 1                           | Ant 2 | SUM   | Ant 1                       | Ant 2 | Ant 1    | Ant 2 |      |            |
| 11a     | 6Mbps     | 2   | 52  | 5260        | 0.16             | 0.18  |                                 |       | 9.76  | 10.24                       |       | 6.76     |       | Pass |            |
| 11a     | 6Mbps     | 2   | 60  | 5300        | 0.16             | 0.18  |                                 |       | 9.89  | 10.24                       |       | 6.76     |       | Pass |            |
| 11a     | 6Mbps     | 2   | 64  | 5320        | 0.16             | 0.18  |                                 |       | 7.06  | 10.24                       |       | 6.76     |       | Pass |            |
| HT20    | MCS0      | 2   | 52  | 5260        | 0.10             | 0.10  |                                 |       | 9.75  | 10.24                       |       | 6.76     |       | Pass |            |
| HT20    | MCS0      | 2   | 60  | 5300        | 0.10             | 0.10  |                                 |       | 9.57  | 10.24                       |       | 6.76     |       | Pass |            |
| HT20    | MCS0      | 2   | 64  | 5320        | 0.10             | 0.10  |                                 |       | 7.26  | 10.24                       |       | 6.76     |       | Pass |            |
| HT40    | MCS0      | 2   | 54  | 5270        | 0.18             | 0.18  |                                 |       | 6.74  | 10.24                       |       | 6.76     |       | Pass |            |
| HT40    | MCS0      | 2   | 62  | 5310        | 0.18             | 0.18  |                                 |       | 1.47  | 10.24                       |       | 6.76     |       | Pass |            |
| VHT80   | MCS0      | 2   | 58  | 5290        | 0.33             | 0.31  |                                 |       | -3.95 | 10.24                       |       | 6.76     |       | Pass |            |

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

| Band III |           |     |     |             |                                 |       |                                   |        |                                    |       |                                   |       |                                      |       |                                           |       |
|----------|-----------|-----|-----|-------------|---------------------------------|-------|-----------------------------------|--------|------------------------------------|-------|-----------------------------------|-------|--------------------------------------|-------|-------------------------------------------|-------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth In U-NII 2C (MHz) |       | 26 dB Bandwidth In U-NII 2C (MHz) |        | IC 99% Bandwidth Power Limit (dBm) |       | IC 99% Bandwidth EIRP Limit (dBm) |       | FCC 26dB Bandwidth Power Limit (dBm) |       | 6 dB Bandwidth for Straddle Channel (MHz) |       |
|          |           |     |     |             | Ant 1                           | Ant 2 | Ant 1                             | Ant 2  | Ant 1                              | Ant 2 | Ant 1                             | Ant 2 | Ant 1                                | Ant 2 | Ant 1                                     | Ant 2 |
| 11a      | 6Mbps     | 2   | 100 | 5500        | 17.25                           | 17.20 | 21.10                             | 21.20  | 23.36                              | 29.36 | 23.98                             | ----  | ----                                 |       |                                           |       |
| 11a      | 6Mbps     | 2   | 116 | 5580        | 17.55                           | 17.95 | 33.80                             | 36.20  | 23.44                              | 29.44 | 23.98                             | ----  | ----                                 |       |                                           |       |
| 11a      | 6Mbps     | 2   | 140 | 5700        | 17.25                           | 17.30 | 21.90                             | 22.10  | 23.37                              | 29.37 | 23.98                             | ----  | ----                                 |       |                                           |       |
| 11a      | 6Mbps     | 2   | 144 | 5720        | 14.35                           | 14.40 | 24.20                             | 24.75  | 22.57                              | 28.57 | 23.98                             | 3.15  | 3.15                                 |       |                                           |       |
| HT20     | MCS0      | 2   | 100 | 5500        | 18.25                           | 18.25 | 22.00                             | 22.00  | 23.61                              | 29.61 | 23.98                             | ----  | ----                                 |       |                                           |       |
| HT20     | MCS0      | 2   | 116 | 5580        | 19.10                           | 21.30 | 42.70                             | 45.05  | 23.81                              | 29.81 | 23.98                             | ----  | ----                                 |       |                                           |       |
| HT20     | MCS0      | 2   | 140 | 5700        | 18.20                           | 18.20 | 22.00                             | 21.90  | 23.60                              | 29.60 | 23.98                             | ----  | ----                                 |       |                                           |       |
| HT20     | MCS0      | 2   | 144 | 5720        | 18.90                           | 19.70 | 29.75                             | 29.90  | 23.76                              | 29.76 | 23.98                             | 3.75  | 3.75                                 |       |                                           |       |
| HT40     | MCS0      | 2   | 102 | 5510        | 36.20                           | 36.30 | 40.68                             | 40.68  | 23.98                              | 30.00 | 23.98                             | ----  | ----                                 |       |                                           |       |
| HT40     | MCS0      | 2   | 110 | 5550        | 36.80                           | 37.60 | 72.68                             | 75.70  | 23.98                              | 30.00 | 23.98                             | ----  | ----                                 |       |                                           |       |
| HT40     | MCS0      | 2   | 134 | 5670        | 36.40                           | 36.40 | 41.22                             | 41.77  | 23.98                              | 30.00 | 23.98                             | ----  | ----                                 |       |                                           |       |
| HT40     | MCS0      | 2   | 142 | 5710        | 45.00                           | 43.00 | 63.72                             | 62.90  | 23.98                              | 30.00 | 23.98                             | 3.18  | 3.09                                 |       |                                           |       |
| VHT80    | MCS0      | 2   | 106 | 5530        | 75.96                           | 75.72 | 83.52                             | 83.52  | 23.98                              | 30.00 | 23.98                             | ----  | ----                                 |       |                                           |       |
| VHT80    | MCS0      | 2   | 138 | 5690        | 73.28                           | 73.28 | 116.84                            | 119.72 | 23.98                              | 30.00 | 23.98                             | 3.1   | 2.78                                 |       |                                           |       |

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

| FCC Band III |           |     |     |             |                  |       |                               |       |       |                                 |       |          |       |                        |           |
|--------------|-----------|-----|-----|-------------|------------------|-------|-------------------------------|-------|-------|---------------------------------|-------|----------|-------|------------------------|-----------|
| Mod.         | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) |       | Average Conducted Power (dBm) |       |       | FCC Conducted Power Limit (dBm) |       | DG (dBi) |       | EIRP Power Limit (dBm) | Pass/Fail |
|              |           |     |     |             | Ant 1            | Ant 2 | Ant 1                         | Ant 2 | SUM   | Ant 1                           | Ant 2 | Ant 1    | Ant 2 |                        |           |
| 11a          | 6Mbps     | 2   | 100 | 5500        | 0.16             | 0.18  | 13.88                         | 14.46 | 17.19 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| 11a          | 6Mbps     | 2   | 116 | 5580        | 0.16             | 0.18  | 17.26                         | 17.93 | 20.62 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| 11a          | 6Mbps     | 2   | 140 | 5700        | 0.16             | 0.18  | 14.86                         | 15.22 | 18.06 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| 11a          | 6Mbps     | 2   | 144 | 5720        | 0.16             | 0.18  | 17.51                         | 17.68 | 20.61 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT20         | MCS0      | 2   | 100 | 5500        | 0.10             | 0.10  | 13.00                         | 13.25 | 16.14 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT20         | MCS0      | 2   | 116 | 5580        | 0.10             | 0.10  | 18.45                         | 19.00 | 21.75 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT20         | MCS0      | 2   | 140 | 5700        | 0.10             | 0.10  | 13.07                         | 13.15 | 16.12 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT20         | MCS0      | 2   | 144 | 5720        | 0.10             | 0.10  | 18.70                         | 18.73 | 21.73 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT40         | MCS0      | 2   | 102 | 5510        | 0.18             | 0.18  | 12.17                         | 12.67 | 15.43 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT40         | MCS0      | 2   | 110 | 5550        | 0.18             | 0.18  | 18.18                         | 19.07 | 21.65 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT40         | MCS0      | 2   | 134 | 5670        | 0.18             | 0.18  | 14.67                         | 15.10 | 17.90 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| HT40         | MCS0      | 2   | 142 | 5710        | 0.18             | 0.18  | 20.66                         | 20.28 | 23.48 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT20        | MCS0      | 2   | 100 | 5500        | 0.10             | 0.10  | 12.95                         | 13.13 | 16.05 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT20        | MCS0      | 2   | 116 | 5580        | 0.10             | 0.10  | 18.42                         | 18.90 | 21.68 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT20        | MCS0      | 2   | 140 | 5700        | 0.10             | 0.10  | 13.03                         | 13.11 | 16.08 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT20        | MCS0      | 2   | 144 | 5720        | 0.10             | 0.10  | 18.69                         | 18.65 | 21.68 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT40        | MCS0      | 2   | 102 | 5510        | 0.18             | 0.14  | 12.13                         | 12.56 | 15.36 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT40        | MCS0      | 2   | 110 | 5550        | 0.18             | 0.14  | 18.12                         | 19.01 | 21.60 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT40        | MCS0      | 2   | 134 | 5670        | 0.18             | 0.14  | 14.49                         | 15.06 | 17.79 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT40        | MCS0      | 2   | 142 | 5710        | 0.18             | 0.14  | 20.63                         | 20.17 | 23.41 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT80        | MCS0      | 2   | 106 | 5530        | 0.33             | 0.31  | 9.28                          | 9.83  | 12.57 | 23.98                           |       | 4.00     |       | 30                     | Pass      |
| VHT80        | MCS0      | 2   | 138 | 5690        | 0.33             | 0.31  | 17.41                         | 17.91 | 20.68 | 23.98                           |       | 4.00     |       | 30                     | Pass      |

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

| Band III |           |     |     |             |                  |       |                                 |       |       |                             |       |          |       |            |
|----------|-----------|-----|-----|-------------|------------------|-------|---------------------------------|-------|-------|-----------------------------|-------|----------|-------|------------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) |       | Average Power Density (dBm/MHz) |       |       | Average PSD Limit (dBm/MHz) |       | DG (dBi) |       | Pass /Fail |
|          |           |     |     |             | Ant 1            | Ant 2 | Ant 1                           | Ant 2 | SUM   | Ant 1                       | Ant 2 | Ant 1    | Ant 2 |            |
| 11a      | 6Mbps     | 2   | 100 | 5500        | 0.16             | 0.18  |                                 |       | 6.20  | 10.24                       |       | 6.76     |       | Pass       |
| 11a      | 6Mbps     | 2   | 116 | 5580        | 0.16             | 0.18  |                                 |       | 9.92  | 10.24                       |       | 6.76     |       | Pass       |
| 11a      | 6Mbps     | 2   | 140 | 5700        | 0.16             | 0.18  |                                 |       | 7.39  | 10.24                       |       | 6.76     |       | Pass       |
| 11a      | 6Mbps     | 2   | 144 | 5720        | 0.16             | 0.18  |                                 |       | 10.20 | 10.24                       |       | 6.76     |       | Pass       |
| HT20     | MCS0      | 2   | 100 | 5500        | 0.10             | 0.10  |                                 |       | 4.27  | 10.24                       |       | 6.76     |       | Pass       |
| HT20     | MCS0      | 2   | 116 | 5580        | 0.10             | 0.10  |                                 |       | 9.96  | 10.24                       |       | 6.76     |       | Pass       |
| HT20     | MCS0      | 2   | 140 | 5700        | 0.10             | 0.10  |                                 |       | 3.59  | 10.24                       |       | 6.76     |       | Pass       |
| HT20     | MCS0      | 2   | 144 | 5720        | 0.10             | 0.10  |                                 |       | 9.83  | 10.24                       |       | 6.76     |       | Pass       |
| HT40     | MCS0      | 2   | 102 | 5510        | 0.18             | 0.18  |                                 |       | 0.76  | 10.24                       |       | 6.76     |       | Pass       |
| HT40     | MCS0      | 2   | 110 | 5550        | 0.18             | 0.18  |                                 |       | 7.08  | 10.24                       |       | 6.76     |       | Pass       |
| HT40     | MCS0      | 2   | 134 | 5670        | 0.18             | 0.18  |                                 |       | 3.05  | 10.24                       |       | 6.76     |       | Pass       |
| HT40     | MCS0      | 2   | 142 | 5710        | 0.18             | 0.18  |                                 |       | 7.66  | 10.24                       |       | 6.76     |       | Pass       |
| VHT80    | MCS0      | 2   | 106 | 5530        | 0.33             | 0.31  |                                 |       | -4.99 | 10.24                       |       | 6.76     |       | Pass       |
| VHT80    | MCS0      | 2   | 138 | 5690        | 0.33             | 0.31  |                                 |       | 2.68  | 10.24                       |       | 6.76     |       | Pass       |

&lt;TXBF Mode&gt;

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

| FCC Band II |           |     |     |             |                  |       |                               |       |       |                                 |       |          |       |                        |           |
|-------------|-----------|-----|-----|-------------|------------------|-------|-------------------------------|-------|-------|---------------------------------|-------|----------|-------|------------------------|-----------|
| Mod.        | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) |       | Average Conducted Power (dBm) |       |       | FCC Conducted Power Limit (dBm) |       | DG (dBi) |       | EIRP Power Limit (dBm) | Pass/Fail |
|             |           |     |     |             | Ant 1            | Ant 2 | Ant 1                         | Ant 2 | SUM   | Ant 1                           | Ant 2 | Ant 1    | Ant 2 |                        |           |
| HT20        | MCS0      | 2   | 52  | 5260        | 0.10             | 0.10  | 16.32                         | 16.29 | 19.32 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT20        | MCS0      | 2   | 60  | 5300        | 0.10             | 0.10  | 16.19                         | 16.28 | 19.25 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT20        | MCS0      | 2   | 64  | 5320        | 0.10             | 0.10  | 12.62                         | 12.99 | 15.82 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT40        | MCS0      | 2   | 54  | 5270        | 0.18             | 0.18  | 16.02                         | 16.07 | 19.05 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT40        | MCS0      | 2   | 62  | 5310        | 0.18             | 0.18  | 10.73                         | 10.99 | 13.87 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT20       | MCS0      | 2   | 52  | 5260        | 0.10             | 0.10  | 16.29                         | 16.21 | 19.26 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT20       | MCS0      | 2   | 60  | 5300        | 0.10             | 0.10  | 16.12                         | 16.19 | 19.17 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT20       | MCS0      | 2   | 64  | 5320        | 0.10             | 0.10  | 12.59                         | 12.92 | 15.77 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT40       | MCS0      | 2   | 54  | 5270        | 0.18             | 0.14  | 16.00                         | 15.98 | 19.00 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT40       | MCS0      | 2   | 62  | 5310        | 0.18             | 0.14  | 10.52                         | 10.93 | 13.74 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT80       | MCS0      | 2   | 58  | 5290        | 0.33             | 0.31  | 8.65                          | 8.73  | 11.70 | 23.22                           | 6.76  | 30       | Pass  |                        |           |

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

| FCC Band III |           |     |     |             |                  |       |                               |       |       |                                 |       |          |       |                        |           |
|--------------|-----------|-----|-----|-------------|------------------|-------|-------------------------------|-------|-------|---------------------------------|-------|----------|-------|------------------------|-----------|
| Mod.         | Data Rate | NTx | CH. | Freq. (MHz) | Duty Factor (dB) |       | Average Conducted Power (dBm) |       |       | FCC Conducted Power Limit (dBm) |       | DG (dBi) |       | EIRP Power Limit (dBm) | Pass/Fail |
|              |           |     |     |             | Ant 1            | Ant 2 | Ant 1                         | Ant 2 | SUM   | Ant 1                           | Ant 2 | Ant 1    | Ant 2 |                        |           |
| HT20         | MCS0      | 2   | 100 | 5500        | 0.10             | 0.10  | 9.99                          | 10.24 | 13.13 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT20         | MCS0      | 2   | 116 | 5580        | 0.10             | 0.10  | 15.44                         | 15.99 | 18.74 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT20         | MCS0      | 2   | 140 | 5700        | 0.10             | 0.10  | 10.06                         | 10.14 | 13.11 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT20         | MCS0      | 2   | 144 | 5720        | 0.10             | 0.10  | 15.69                         | 15.72 | 18.72 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT40         | MCS0      | 2   | 102 | 5510        | 0.18             | 0.18  | 9.16                          | 9.66  | 12.42 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT40         | MCS0      | 2   | 110 | 5550        | 0.18             | 0.18  | 15.17                         | 16.06 | 18.64 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT40         | MCS0      | 2   | 134 | 5670        | 0.18             | 0.18  | 11.66                         | 12.09 | 14.89 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| HT40         | MCS0      | 2   | 142 | 5710        | 0.18             | 0.18  | 17.65                         | 17.27 | 20.47 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT20        | MCS0      | 2   | 100 | 5500        | 0.10             | 0.10  | 9.94                          | 10.12 | 13.04 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT20        | MCS0      | 2   | 116 | 5580        | 0.10             | 0.10  | 15.41                         | 15.89 | 18.67 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT20        | MCS0      | 2   | 140 | 5700        | 0.10             | 0.10  | 10.02                         | 10.10 | 13.07 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT20        | MCS0      | 2   | 144 | 5720        | 0.10             | 0.10  | 15.68                         | 15.64 | 18.67 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT40        | MCS0      | 2   | 102 | 5510        | 0.18             | 0.14  | 9.12                          | 9.55  | 12.35 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT40        | MCS0      | 2   | 110 | 5550        | 0.18             | 0.14  | 15.11                         | 16.00 | 18.59 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT40        | MCS0      | 2   | 134 | 5670        | 0.18             | 0.14  | 11.48                         | 12.05 | 14.78 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT40        | MCS0      | 2   | 142 | 5710        | 0.18             | 0.14  | 17.62                         | 17.16 | 20.40 | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT80        | MCS0      | 2   | 106 | 5530        | 0.33             | 0.31  | 6.27                          | 6.82  | 9.56  | 23.22                           | 6.76  | 30       | Pass  |                        |           |
| VHT80        | MCS0      | 2   | 138 | 5690        | 0.33             | 0.31  | 14.40                         | 14.90 | 17.67 | 23.22                           | 6.76  | 30       | Pass  |                        |           |

Remark: TXBF = CDD power + 3.01 dB





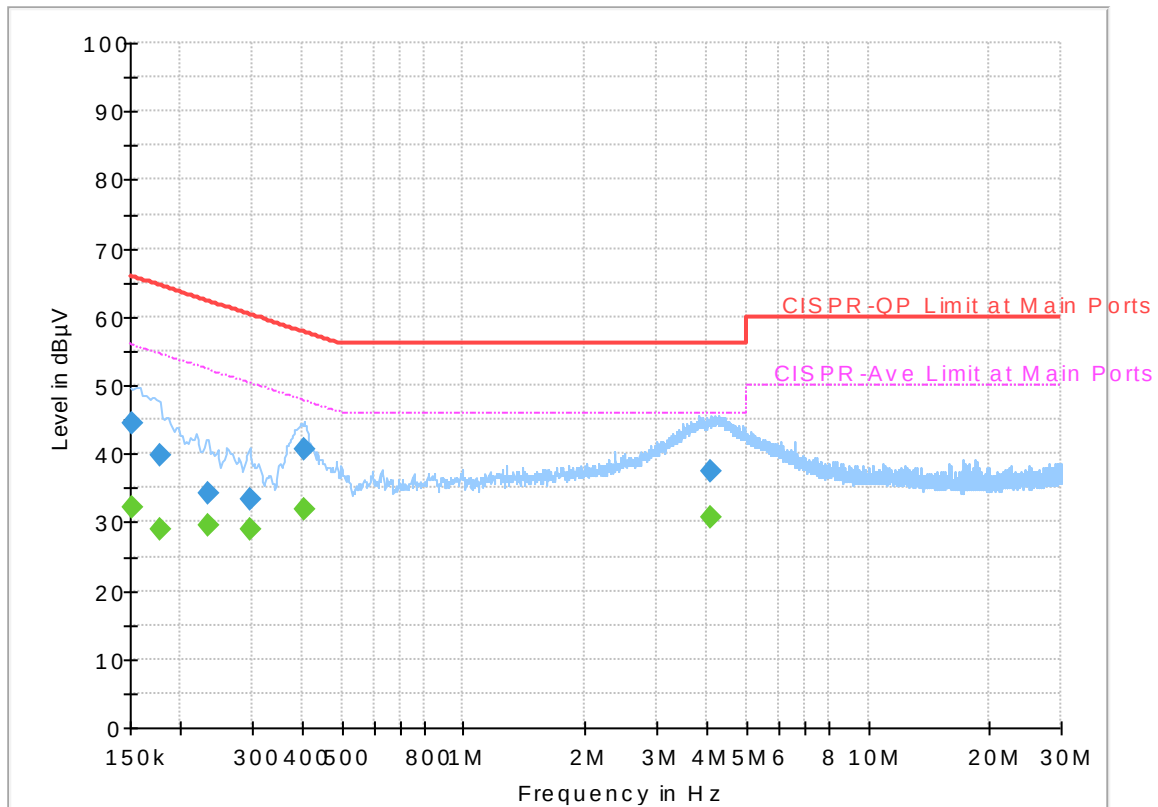
## **Appendix B. AC Conducted Emission Test Results**

|                        |              |                            |         |
|------------------------|--------------|----------------------------|---------|
| <b>Test Engineer :</b> | Arthur Hsieh | <b>Temperature :</b>       | 25~26°C |
|                        |              | <b>Relative Humidity :</b> | 64~66%  |

## EUT Information

Test Mode : Mode 1  
Test Voltage : 120Vac/60Hz  
Phase : Line

Full Spectrum



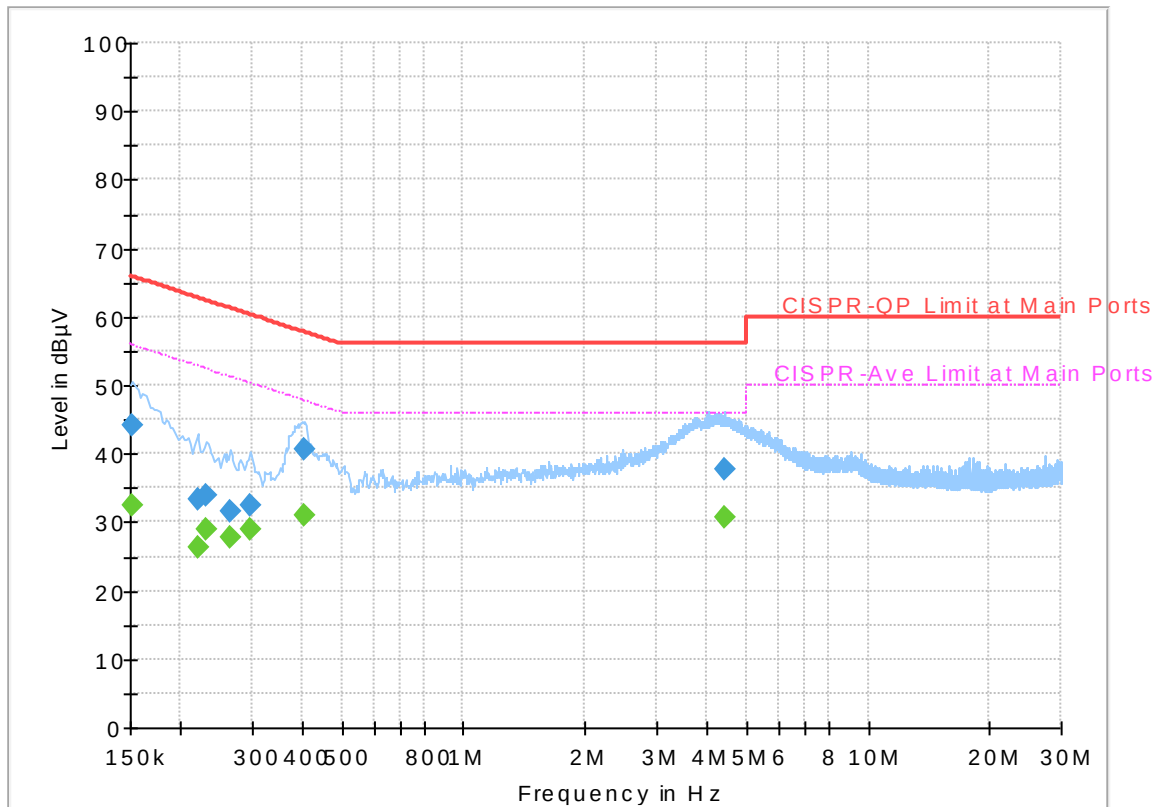
## Final\_Result

| Frequency (MHz) | QuasiPeak (dBμV) | CAverage (dBμV) | Limit (dBμV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|------|--------|------------|
| 0.152250        | ---              | 32.25           | 55.88        | 23.63       | L1   | OFF    | 19.5       |
| 0.152250        | 44.41            | ---             | 65.88        | 21.47       | L1   | OFF    | 19.5       |
| 0.177000        | ---              | 29.02           | 54.63        | 25.61       | L1   | OFF    | 19.5       |
| 0.177000        | 39.85            | ---             | 64.63        | 24.78       | L1   | OFF    | 19.5       |
| 0.233250        | ---              | 29.50           | 52.33        | 22.83       | L1   | OFF    | 19.5       |
| 0.233250        | 34.22            | ---             | 62.33        | 28.11       | L1   | OFF    | 19.5       |
| 0.296250        | ---              | 29.06           | 50.35        | 21.29       | L1   | OFF    | 19.5       |
| 0.296250        | 33.19            | ---             | 60.35        | 27.16       | L1   | OFF    | 19.5       |
| 0.404250        | ---              | 31.80           | 47.77        | 15.97       | L1   | OFF    | 19.5       |
| 0.404250        | 40.57            | ---             | 57.77        | 17.20       | L1   | OFF    | 19.5       |
| 4.085250        | ---              | 30.67           | 46.00        | 15.33       | L1   | OFF    | 19.6       |
| 4.085250        | 37.50            | ---             | 56.00        | 18.50       | L1   | OFF    | 19.6       |

## EUT Information

Test Mode : Mode 1  
Test Voltage : 120Vac/60Hz  
Phase : Neutral

Full Spectrum



## Final\_Result

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|------|--------|------------|
| 0.152250        | ---              | 32.34           | 55.88        | 23.54       | N    | OFF    | 19.5       |
| 0.152250        | 44.25            | ---             | 65.88        | 21.63       | N    | OFF    | 19.5       |
| 0.219750        | ---              | 26.24           | 52.83        | 26.59       | N    | OFF    | 19.5       |
| 0.219750        | 33.43            | ---             | 62.83        | 29.40       | N    | OFF    | 19.5       |
| 0.231000        | ---              | 28.85           | 52.41        | 23.56       | N    | OFF    | 19.5       |
| 0.231000        | 33.93            | ---             | 62.41        | 28.48       | N    | OFF    | 19.5       |
| 0.264750        | ---              | 27.73           | 51.28        | 23.55       | N    | OFF    | 19.5       |
| 0.264750        | 31.68            | ---             | 61.28        | 29.60       | N    | OFF    | 19.5       |
| 0.298500        | ---              | 29.06           | 50.28        | 21.22       | N    | OFF    | 19.5       |
| 0.298500        | 32.39            | ---             | 60.28        | 27.89       | N    | OFF    | 19.5       |
| 0.406500        | ---              | 30.97           | 47.72        | 16.75       | N    | OFF    | 19.5       |
| 0.406500        | 40.66            | ---             | 57.72        | 17.06       | N    | OFF    | 19.5       |
| 4.409250        | ---              | 30.61           | 46.00        | 15.39       | N    | OFF    | 19.6       |
| 4.409250        | 37.82            | ---             | 56.00        | 18.18       | N    | OFF    | 19.6       |



## Appendix C. Radiated Spurious Emission

|                 |                                   |                     |         |
|-----------------|-----------------------------------|---------------------|---------|
| Test Engineer : | Watt Tseng, Karl Hou, and Nick Yu | Temperature :       | 21~23°C |
|                 |                                   | Relative Humidity : | 59~62%  |

## Band 2 - 5250~5350MHz

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

| WIFI                        | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|-----------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                        |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1+2                         |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a<br>CH 52<br>5260MHz |      | 5135.66   | 50.58      | -23.42 | 74         | 43.96    | 31.78    | 5.98   | 31.14  | 271    | 163     | P       | H       |
|                             |      | 5039.78   | 41.93      | -12.07 | 54         | 35.42    | 31.73    | 5.92   | 31.14  | 271    | 163     | A       | H       |
|                             | *    | 5260      | 121.51     | -      | -          | 114.73   | 31.86    | 6.07   | 31.15  | 271    | 163     | P       | H       |
|                             | *    | 5260      | 110.67     | -      | -          | 103.89   | 31.86    | 6.07   | 31.15  | 271    | 163     | A       | H       |
|                             |      | 5357.76   | 53.35      | -20.65 | 74         | 46.47    | 31.91    | 6.12   | 31.15  | 271    | 163     | P       | H       |
|                             |      | 5424.24   | 42.49      | -11.51 | 54         | 35.51    | 31.95    | 6.18   | 31.15  | 271    | 163     | A       | H       |
|                             |      | 5139.4    | 49.08      | -24.92 | 74         | 42.46    | 31.78    | 5.98   | 31.14  | 100    | 231     | P       | V       |
|                             |      | 5120.02   | 38.14      | -15.86 | 54         | 31.54    | 31.77    | 5.97   | 31.14  | 100    | 231     | A       | V       |
|                             | *    | 5260      | 115.54     | -      | -          | 108.76   | 31.86    | 6.07   | 31.15  | 100    | 231     | P       | V       |
|                             | *    | 5260      | 104.79     | -      | -          | 98.01    | 31.86    | 6.07   | 31.15  | 100    | 231     | A       | V       |
|                             |      | 5351.76   | 51.14      | -22.86 | 74         | 44.26    | 31.91    | 6.12   | 31.15  | 100    | 231     | P       | V       |
|                             |      | 5353.92   | 38.84      | -15.16 | 54         | 31.96    | 31.91    | 6.12   | 31.15  | 100    | 231     | A       | V       |
| 802.11a<br>CH 60<br>5300MHz |      | 5136.34   | 50.65      | -23.35 | 74         | 44.03    | 31.78    | 5.98   | 31.14  | 281    | 160     | P       | H       |
|                             |      | 5039.78   | 40.9       | -13.1  | 54         | 34.39    | 31.73    | 5.92   | 31.14  | 281    | 160     | A       | H       |
|                             | *    | 5300      | 123.2      | -      | -          | 116.38   | 31.88    | 6.09   | 31.15  | 281    | 160     | P       | H       |
|                             | *    | 5300      | 112.19     | -      | -          | 105.37   | 31.88    | 6.09   | 31.15  | 281    | 160     | A       | H       |
|                             |      | 5351.04   | 65.64      | -8.36  | 74         | 58.76    | 31.91    | 6.12   | 31.15  | 281    | 160     | P       | H       |
|                             |      | 5350.08   | 52.82      | -1.18  | 54         | 45.94    | 31.91    | 6.12   | 31.15  | 281    | 160     | A       | H       |
|                             |      | 5113.22   | 48.86      | -25.14 | 74         | 42.26    | 31.77    | 5.97   | 31.14  | 100    | 232     | P       | V       |
|                             |      | 5136      | 37.88      | -16.12 | 54         | 31.26    | 31.78    | 5.98   | 31.14  | 100    | 232     | A       | V       |
|                             | *    | 5300      | 117.44     | -      | -          | 110.62   | 31.88    | 6.09   | 31.15  | 100    | 232     | P       | V       |
|                             | *    | 5300      | 106.7      | -      | -          | 99.88    | 31.88    | 6.09   | 31.15  | 100    | 232     | A       | V       |
|                             |      | 5351.52   | 60.48      | -13.52 | 74         | 53.6     | 31.91    | 6.12   | 31.15  | 100    | 232     | P       | V       |
|                             |      | 5350.32   | 48.42      | -5.58  | 54         | 41.54    | 31.91    | 6.12   | 31.15  | 100    | 232     | A       | V       |



|                                                  |                                                                                             |         |        |        |    |        |       |      |       |     |     |   |   |
|--------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|--------|-------|------|-------|-----|-----|---|---|
| <b>802.11a</b><br><b>CH 64</b><br><b>5320MHz</b> | *                                                                                           | 5320    | 118.71 | -      | -  | 111.87 | 31.89 | 6.1  | 31.15 | 281 | 160 | P | H |
|                                                  | *                                                                                           | 5320    | 108.17 | -      | -  | 101.33 | 31.89 | 6.1  | 31.15 | 281 | 160 | A | H |
|                                                  |                                                                                             | 5352.64 | 67.08  | -6.92  | 74 | 60.2   | 31.91 | 6.12 | 31.15 | 281 | 160 | P | H |
|                                                  |                                                                                             | 5352.96 | 52.7   | -1.3   | 54 | 45.82  | 31.91 | 6.12 | 31.15 | 281 | 160 | A | H |
|                                                  |                                                                                             |         |        |        |    |        |       |      |       |     |     |   | H |
|                                                  |                                                                                             |         |        |        |    |        |       |      |       |     |     |   | H |
|                                                  | *                                                                                           | 5320    | 114.22 | -      | -  | 107.38 | 31.89 | 6.1  | 31.15 | 100 | 229 | P | V |
|                                                  | *                                                                                           | 5320    | 103.26 | -      | -  | 96.42  | 31.89 | 6.1  | 31.15 | 100 | 229 | A | V |
|                                                  |                                                                                             | 5352.8  | 62.61  | -11.39 | 74 | 55.73  | 31.91 | 6.12 | 31.15 | 100 | 229 | P | V |
|                                                  |                                                                                             | 5350.08 | 48.66  | -5.34  | 54 | 41.78  | 31.91 | 6.12 | 31.15 | 100 | 229 | A | V |
|                                                  |                                                                                             |         |        |        |    |        |       |      |       |     |     |   | V |
|                                                  |                                                                                             |         |        |        |    |        |       |      |       |     |     |   | V |
| <b>Remark</b>                                    | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |        |       |      |       |     |     |   |   |



## Band 2 5250~5350MHz

## WIFI 802.11a (Harmonic @ 3m)

| WIFI<br>Ant.<br>1+2         | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11a<br>CH 52<br>5260MHz |                                                                                             | 10520                | 45.52               | -22.68                  | 68.2                        | 55.89                     | 40.11                         | 9.87                   | 60.35                      | 175                  | 160                     | P                       | H               |
|                             |                                                                                             | 15780                | 66.58               | -7.42                   | 74                          | 73.92                     | 38.05                         | 12.32                  | 57.71                      | 175                  | 160                     | P                       | H               |
|                             |                                                                                             | 15780                | 52.53               | -1.47                   | 54                          | 59.87                     | 38.05                         | 12.32                  | 57.71                      | 175                  | 160                     | A                       | H               |
|                             |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                             |                                                                                             | 10520                | 47.73               | -20.47                  | 68.2                        | 58.1                      | 40.11                         | 9.87                   | 60.35                      | 100                  | 0                       | P                       | V               |
|                             |                                                                                             | 15780                | 63.46               | -10.54                  | 74                          | 70.8                      | 38.05                         | 12.32                  | 57.71                      | 189                  | 228                     | P                       | V               |
|                             |                                                                                             | 15780                | 49.55               | -4.45                   | 54                          | 56.89                     | 38.05                         | 12.32                  | 57.71                      | 189                  | 228                     | A                       | V               |
|                             |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11a<br>CH 60<br>5300MHz |                                                                                             | 10600                | 47.3                | -26.7                   | 74                          | 57.76                     | 40.18                         | 9.9                    | 60.54                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 15900                | 65.28               | -8.72                   | 74                          | 72.64                     | 37.81                         | 12.37                  | 57.54                      | 177                  | 160                     | P                       | H               |
|                             |                                                                                             | 15900                | 51.78               | -2.22                   | 54                          | 59.14                     | 37.81                         | 12.37                  | 57.54                      | 177                  | 160                     | A                       | H               |
|                             |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                             |                                                                                             | 10600                | 48.01               | -25.99                  | 74                          | 58.47                     | 40.18                         | 9.9                    | 60.54                      | 100                  | 0                       | P                       | V               |
|                             |                                                                                             | 15900                | 63.87               | -10.13                  | 74                          | 71.23                     | 37.81                         | 12.37                  | 57.54                      | 189                  | 224                     | P                       | V               |
|                             |                                                                                             | 15900                | 49.87               | -4.13                   | 54                          | 57.23                     | 37.81                         | 12.37                  | 57.54                      | 189                  | 224                     | A                       | V               |
|                             |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11a<br>CH 64<br>5320MHz |                                                                                             | 10640                | 49.09               | -24.91                  | 74                          | 59.61                     | 40.21                         | 9.91                   | 60.64                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 15960                | 58                  | -16                     | 74                          | 65.41                     | 37.67                         | 12.38                  | 57.46                      | 175                  | 160                     | P                       | H               |
|                             |                                                                                             | 15960                | 43.29               | -10.71                  | 54                          | 50.7                      | 37.67                         | 12.38                  | 57.46                      | 175                  | 160                     | A                       | H               |
|                             |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                             |                                                                                             | 10640                | 48.08               | -25.92                  | 74                          | 58.6                      | 40.21                         | 9.91                   | 60.64                      | 100                  | 0                       | P                       | V               |
|                             |                                                                                             | 15960                | 49.32               | -24.68                  | 74                          | 56.73                     | 37.67                         | 12.38                  | 57.46                      | 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 2 5250~5350MHz

## WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1+2                 | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 52<br>5260MHz |      | 5146.54              | 60.4                | -13.6                   | 74                          | 53.76                     | 31.79                         | 5.99                   | 31.14                      | 253                  | 157                     | P                       | H               |
|                                     |      | 5147.22              | 41.73               | -12.27                  | 54                          | 35.09                     | 31.79                         | 5.99                   | 31.14                      | 253                  | 157                     | A                       | H               |
|                                     | *    | 5260                 | 123.2               | -                       | -                           | 116.42                    | 31.86                         | 6.07                   | 31.15                      | 253                  | 157                     | P                       | H               |
|                                     | *    | 5260                 | 110.44              | -                       | -                           | 103.66                    | 31.86                         | 6.07                   | 31.15                      | 253                  | 157                     | A                       | H               |
|                                     |      | 5360.16              | 60.32               | -13.68                  | 74                          | 53.42                     | 31.91                         | 6.14                   | 31.15                      | 253                  | 157                     | P                       | H               |
|                                     |      | 5362.32              | 43.66               | -10.34                  | 54                          | 36.75                     | 31.92                         | 6.14                   | 31.15                      | 253                  | 157                     | A                       | H               |
|                                     |      | 5146.54              | 50.67               | -23.33                  | 74                          | 44.03                     | 31.79                         | 5.99                   | 31.14                      | 100                  | 220                     | P                       | V               |
|                                     |      | 5145.52              | 37.86               | -16.14                  | 54                          | 31.22                     | 31.79                         | 5.99                   | 31.14                      | 100                  | 220                     | A                       | V               |
|                                     | *    | 5260                 | 117.3               | -                       | -                           | 110.52                    | 31.86                         | 6.07                   | 31.15                      | 100                  | 220                     | P                       | V               |
|                                     | *    | 5260                 | 104.61              | -                       | -                           | 97.83                     | 31.86                         | 6.07                   | 31.15                      | 100                  | 220                     | A                       | V               |
|                                     |      | 5361.12              | 53.17               | -20.83                  | 74                          | 46.26                     | 31.92                         | 6.14                   | 31.15                      | 100                  | 220                     | P                       | V               |
|                                     |      | 5361.36              | 39.36               | -14.64                  | 54                          | 32.45                     | 31.92                         | 6.14                   | 31.15                      | 100                  | 220                     | A                       | V               |
| 802.11n<br>HT20<br>CH 60<br>5300MHz |      | 5120.02              | 50.39               | -23.61                  | 74                          | 43.79                     | 31.77                         | 5.97                   | 31.14                      | 262                  | 152                     | P                       | H               |
|                                     |      | 5120.02              | 39.81               | -14.19                  | 54                          | 33.21                     | 31.77                         | 5.97                   | 31.14                      | 262                  | 152                     | A                       | H               |
|                                     | *    | 5300                 | 123.01              | -                       | -                           | 116.19                    | 31.88                         | 6.09                   | 31.15                      | 262                  | 152                     | P                       | H               |
|                                     | *    | 5300                 | 110.4               | -                       | -                           | 103.58                    | 31.88                         | 6.09                   | 31.15                      | 262                  | 152                     | A                       | H               |
|                                     |      | 5364                 | 67.88               | -6.12                   | 74                          | 60.97                     | 31.92                         | 6.14                   | 31.15                      | 262                  | 152                     | P                       | H               |
|                                     |      | 5350.08              | 52.89               | -1.11                   | 54                          | 46.01                     | 31.91                         | 6.12                   | 31.15                      | 262                  | 152                     | A                       | H               |
|                                     |      | 5140.76              | 48.5                | -25.5                   | 74                          | 41.87                     | 31.79                         | 5.98                   | 31.14                      | 100                  | 228                     | P                       | V               |
|                                     |      | 5120.02              | 37.01               | -16.99                  | 54                          | 30.41                     | 31.77                         | 5.97                   | 31.14                      | 100                  | 228                     | A                       | V               |
|                                     | *    | 5300                 | 117.25              | -                       | -                           | 110.43                    | 31.88                         | 6.09                   | 31.15                      | 100                  | 228                     | P                       | V               |
|                                     | *    | 5300                 | 104.78              | -                       | -                           | 97.96                     | 31.88                         | 6.09                   | 31.15                      | 100                  | 228                     | A                       | V               |
|                                     |      | 5350.32              | 68.07               | -5.93                   | 74                          | 61.19                     | 31.91                         | 6.12                   | 31.15                      | 100                  | 228                     | P                       | V               |
|                                     |      | 5350.08              | 52.91               | -1.09                   | 54                          | 46.03                     | 31.91                         | 6.12                   | 31.15                      | 100                  | 228                     | A                       | V               |



|                                                                 |                                                                                             |         |        |        |    |        |       |      |       |     |     |   |   |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|--------|-------|------|-------|-----|-----|---|---|
| <b>802.11n</b><br><b>HT20</b><br><b>CH 64</b><br><b>5320MHz</b> | *                                                                                           | 5320    | 117.95 | -      | -  | 111.11 | 31.89 | 6.1  | 31.15 | 290 | 162 | P | H |
|                                                                 | *                                                                                           | 5320    | 105.79 | -      | -  | 98.95  | 31.89 | 6.1  | 31.15 | 290 | 162 | A | H |
|                                                                 |                                                                                             | 5354.4  | 67.4   | -6.6   | 74 | 60.52  | 31.91 | 6.12 | 31.15 | 290 | 162 | P | H |
|                                                                 |                                                                                             | 5350.08 | 52.8   | -1.2   | 54 | 45.92  | 31.91 | 6.12 | 31.15 | 290 | 162 | A | H |
|                                                                 |                                                                                             |         |        |        |    |        |       |      |       |     |     |   | H |
|                                                                 |                                                                                             |         |        |        |    |        |       |      |       |     |     |   | H |
|                                                                 | *                                                                                           | 5320    | 112.86 | -      | -  | 106.02 | 31.89 | 6.1  | 31.15 | 100 | 228 | P | V |
|                                                                 | *                                                                                           | 5320    | 100.47 | -      | -  | 93.63  | 31.89 | 6.1  | 31.15 | 100 | 228 | A | V |
|                                                                 |                                                                                             | 5351.04 | 62.67  | -11.33 | 74 | 55.79  | 31.91 | 6.12 | 31.15 | 100 | 228 | P | V |
|                                                                 |                                                                                             | 5350.08 | 49.17  | -4.83  | 54 | 42.29  | 31.91 | 6.12 | 31.15 | 100 | 228 | A | V |
|                                                                 |                                                                                             |         |        |        |    |        |       |      |       |     |     |   | V |
|                                                                 |                                                                                             |         |        |        |    |        |       |      |       |     |     |   | V |
| <b>Remark</b>                                                   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |        |       |      |       |     |     |   |   |





**Band 2 5250~5350MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11n<br>HT20<br>CH 52<br>5260MHz |                                                                                             | 10520                | 46.32               | -21.88                  | 68.2                        | 56.69                   | 40.11                         | 9.87                   | 60.35                      | 100                  | 0                       | P                     | H             |
|                                     |                                                                                             | 15780                | 66.49               | -7.51                   | 74                          | 73.83                   | 38.05                         | 12.32                  | 57.71                      | 173                  | 160                     | P                     | H             |
|                                     |                                                                                             | 15780                | 52.77               | -1.23                   | 54                          | 60.11                   | 38.05                         | 12.32                  | 57.71                      | 173                  | 160                     | A                     | H             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                     |                                                                                             | 10520                | 45.82               | -22.38                  | 68.2                        | 56.19                   | 40.11                         | 9.87                   | 60.35                      | 100                  | 0                       | P                     | V             |
|                                     |                                                                                             | 15780                | 64.82               | -9.18                   | 74                          | 72.16                   | 38.05                         | 12.32                  | 57.71                      | 194                  | 228                     | P                     | V             |
|                                     |                                                                                             | 15780                | 49.55               | -4.45                   | 54                          | 56.89                   | 38.05                         | 12.32                  | 57.71                      | 194                  | 228                     | A                     | V             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| 802.11n<br>HT20<br>CH 60<br>5300MHz |                                                                                             | 10600                | 47.51               | -26.49                  | 74                          | 57.97                   | 40.18                         | 9.9                    | 60.54                      | 100                  | 0                       | P                     | H             |
|                                     |                                                                                             | 15900                | 65.65               | -8.35                   | 74                          | 73.01                   | 37.81                         | 12.37                  | 57.54                      | 174                  | 161                     | P                     | H             |
|                                     |                                                                                             | 15900                | 51.28               | -2.72                   | 54                          | 58.64                   | 37.81                         | 12.37                  | 57.54                      | 174                  | 161                     | A                     | H             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                     |                                                                                             | 10600                | 48.12               | -25.88                  | 74                          | 58.58                   | 40.18                         | 9.9                    | 60.54                      | 100                  | 0                       | P                     | V             |
|                                     |                                                                                             | 15900                | 63.74               | -10.26                  | 74                          | 71.1                    | 37.81                         | 12.37                  | 57.54                      | 196                  | 228                     | P                     | V             |
|                                     |                                                                                             | 15900                | 48.23               | -5.77                   | 54                          | 55.59                   | 37.81                         | 12.37                  | 57.54                      | 196                  | 228                     | A                     | V             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| 802.11n<br>HT20<br>CH 64<br>5320MHz |                                                                                             | 10640                | 47.58               | -26.42                  | 74                          | 58.1                    | 40.21                         | 9.91                   | 60.64                      | 100                  | 0                       | P                     | H             |
|                                     |                                                                                             | 15960                | 58.02               | -15.98                  | 74                          | 65.43                   | 37.67                         | 12.38                  | 57.46                      | 175                  | 160                     | P                     | H             |
|                                     |                                                                                             | 15960                | 41.03               | -12.97                  | 54                          | 48.44                   | 37.67                         | 12.38                  | 57.46                      | 175                  | 160                     | A                     | H             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                     |                                                                                             | 10640                | 46.99               | -27.01                  | 74                          | 57.51                   | 40.21                         | 9.91                   | 60.64                      | 100                  | 0                       | P                     | V             |
|                                     |                                                                                             | 15960                | 56.57               | -17.43                  | 74                          | 63.98                   | 37.67                         | 12.38                  | 57.46                      | 184                  | 224                     | P                     | V             |
|                                     |                                                                                             | 15960                | 40.06               | -13.94                  | 54                          | 47.47                   | 37.67                         | 12.38                  | 57.46                      | 184                  | 224                     | A                     | V             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |



## Band 2 5250~5350MHz

## WIFI 802.11n HT40 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1+2                 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT40<br>CH 54<br>5270MHz |                                                                                             | 5136.34              | 56.72               | -17.28                  | 74                          | 50.1                      | 31.78                         | 5.98                   | 31.14                      | 268                  | 161                     | P                       | H               |
|                                     |                                                                                             | 5143.48              | 45.31               | -8.69                   | 54                          | 38.67                     | 31.79                         | 5.99                   | 31.14                      | 268                  | 161                     | A                       | H               |
|                                     | *                                                                                           | 5270                 | 118.54              | -                       | -                           | 111.75                    | 31.86                         | 6.08                   | 31.15                      | 268                  | 161                     | P                       | H               |
|                                     | *                                                                                           | 5270                 | 107.69              | -                       | -                           | 100.9                     | 31.86                         | 6.08                   | 31.15                      | 268                  | 161                     | A                       | H               |
|                                     |                                                                                             | 5350.56              | 65.91               | -8.09                   | 74                          | 59.03                     | 31.91                         | 6.12                   | 31.15                      | 268                  | 161                     | P                       | H               |
|                                     |                                                                                             | 5359.68              | 51.24               | -2.76                   | 54                          | 44.34                     | 31.91                         | 6.14                   | 31.15                      | 268                  | 161                     | A                       | H               |
|                                     |                                                                                             | 5144.84              | 53.89               | -20.11                  | 74                          | 47.25                     | 31.79                         | 5.99                   | 31.14                      | 219                  | 230                     | P                       | V               |
|                                     |                                                                                             | 5148.58              | 41.62               | -12.38                  | 54                          | 34.98                     | 31.79                         | 5.99                   | 31.14                      | 219                  | 230                     | A                       | V               |
|                                     | *                                                                                           | 5270                 | 112.97              | -                       | -                           | 106.18                    | 31.86                         | 6.08                   | 31.15                      | 219                  | 230                     | P                       | V               |
|                                     | *                                                                                           | 5270                 | 102.27              | -                       | -                           | 95.48                     | 31.86                         | 6.08                   | 31.15                      | 219                  | 230                     | A                       | V               |
|                                     |                                                                                             | 5354.4               | 58.95               | -15.05                  | 74                          | 52.07                     | 31.91                         | 6.12                   | 31.15                      | 219                  | 230                     | P                       | V               |
|                                     |                                                                                             | 5350.08              | 46.36               | -7.64                   | 54                          | 39.48                     | 31.91                         | 6.12                   | 31.15                      | 219                  | 230                     | A                       | V               |
| 802.11n<br>HT40<br>CH 62<br>5310MHz |                                                                                             | 5114.92              | 50.49               | -23.51                  | 74                          | 43.89                     | 31.77                         | 5.97                   | 31.14                      | 281                  | 159                     | P                       | H               |
|                                     |                                                                                             | 5136                 | 41.33               | -12.67                  | 54                          | 34.71                     | 31.78                         | 5.98                   | 31.14                      | 281                  | 159                     | A                       | H               |
|                                     | *                                                                                           | 5310                 | 113.13              | -                       | -                           | 106.29                    | 31.89                         | 6.1                    | 31.15                      | 281                  | 159                     | P                       | H               |
|                                     | *                                                                                           | 5310                 | 102.74              | -                       | -                           | 95.9                      | 31.89                         | 6.1                    | 31.15                      | 281                  | 159                     | A                       | H               |
|                                     |                                                                                             | 5355.6               | 66.11               | -7.89                   | 74                          | 59.23                     | 31.91                         | 6.12                   | 31.15                      | 281                  | 159                     | P                       | H               |
|                                     |                                                                                             | 5354.16              | 52.74               | -1.26                   | 54                          | 45.86                     | 31.91                         | 6.12                   | 31.15                      | 281                  | 159                     | A                       | H               |
|                                     |                                                                                             | 5138.38              | 48.5                | -25.5                   | 74                          | 41.88                     | 31.78                         | 5.98                   | 31.14                      | 202                  | 226                     | P                       | V               |
|                                     |                                                                                             | 5136                 | 38.68               | -15.32                  | 54                          | 32.06                     | 31.78                         | 5.98                   | 31.14                      | 202                  | 226                     | A                       | V               |
|                                     | *                                                                                           | 5310                 | 107.81              | -                       | -                           | 100.97                    | 31.89                         | 6.1                    | 31.15                      | 202                  | 226                     | P                       | V               |
|                                     | *                                                                                           | 5310                 | 97.45               | -                       | -                           | 90.61                     | 31.89                         | 6.1                    | 31.15                      | 202                  | 226                     | A                       | V               |
|                                     |                                                                                             | 5354.4               | 57.52               | -16.48                  | 74                          | 50.64                     | 31.91                         | 6.12                   | 31.15                      | 202                  | 226                     | P                       | V               |
|                                     |                                                                                             | 5350.08              | 46.78               | -7.22                   | 54                          | 39.9                      | 31.91                         | 6.12                   | 31.15                      | 202                  | 226                     | A                       | V               |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



**Band 2 5250~5350MHz**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11n<br>HT40<br>CH 54<br>5270MHz |                                                                                             | 10540                | 47.37               | -20.83                  | 68.2                        | 57.76                   | 40.13                         | 9.88                   | 60.4                       | 100                  | 0                       | P                     | H             |
|                                     |                                                                                             | 15810                | 61.17               | -12.83                  | 74                          | 68.52                   | 37.98                         | 12.34                  | 57.67                      | 172                  | 160                     | P                     | H             |
|                                     |                                                                                             | 15810                | 48.88               | -5.12                   | 54                          | 56.23                   | 37.98                         | 12.34                  | 57.67                      | 172                  | 160                     | A                     | H             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                     |                                                                                             | 10540                | 47.21               | -20.99                  | 68.2                        | 57.6                    | 40.13                         | 9.88                   | 60.4                       | 100                  | 0                       | P                     | V             |
|                                     |                                                                                             | 15810                | 58.47               | -15.53                  | 74                          | 65.82                   | 37.98                         | 12.34                  | 57.67                      | 195                  | 228                     | P                     | V             |
|                                     |                                                                                             | 15810                | 45.21               | -8.79                   | 54                          | 52.56                   | 37.98                         | 12.34                  | 57.67                      | 195                  | 228                     | A                     | V             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| 802.11n<br>HT40<br>CH 62<br>5310MHz |                                                                                             | 10620                | 47.57               | -26.43                  | 74                          | 58.06                   | 40.2                          | 9.9                    | 60.59                      | 100                  | 0                       | P                     | H             |
|                                     |                                                                                             | 15930                | 46.58               | -27.42                  | 74                          | 53.95                   | 37.74                         | 12.39                  | 57.5                       | 100                  | 0                       | P                     | H             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                     |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                     |                                                                                             | 10620                | 46.84               | -27.16                  | 74                          | 57.33                   | 40.2                          | 9.9                    | 60.59                      | 100                  | 0                       | P                     | V             |
|                                     |                                                                                             | 15930                | 44.46               | -29.54                  | 74                          | 51.83                   | 37.74                         | 12.39                  | 57.5                       | 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 2 5250~5350MHz

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

| WIFI<br>Ant.<br>1+2                   | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac<br>VHT80<br>CH 58<br>5290MHz |                                                                                             | 5136                 | 52.66               | -21.34                  | 74                          | 46.04                   | 31.78                         | 5.98                   | 31.14                      | 247                  | 157                     | P                     | H             |
|                                       |                                                                                             | 5120.02              | 42.95               | -11.05                  | 54                          | 36.35                   | 31.77                         | 5.97                   | 31.14                      | 247                  | 157                     | A                     | H             |
|                                       | *                                                                                           | 5290                 | 107.42              | -                       | -                           | 100.61                  | 31.87                         | 6.09                   | 31.15                      | 247                  | 157                     | P                     | H             |
|                                       | *                                                                                           | 5290                 | 96.97               | -                       | -                           | 90.16                   | 31.87                         | 6.09                   | 31.15                      | 247                  | 157                     | A                     | H             |
|                                       |                                                                                             | 5355.12              | 63.93               | -10.07                  | 74                          | 57.05                   | 31.91                         | 6.12                   | 31.15                      | 247                  | 157                     | P                     | H             |
|                                       |                                                                                             | 5356.08              | 52.39               | -1.61                   | 54                          | 45.51                   | 31.91                         | 6.12                   | 31.15                      | 247                  | 157                     | P                     | H             |
|                                       |                                                                                             | 5134.3               | 49.07               | -24.93                  | 74                          | 42.45                   | 31.78                         | 5.98                   | 31.14                      | 100                  | 231                     | P                     | V             |
|                                       |                                                                                             | 5120.02              | 39.06               | -14.94                  | 54                          | 32.46                   | 31.77                         | 5.97                   | 31.14                      | 100                  | 231                     | A                     | V             |
|                                       | *                                                                                           | 5290                 | 102.84              | -                       | -                           | 96.03                   | 31.87                         | 6.09                   | 31.15                      | 100                  | 231                     | P                     | V             |
|                                       | *                                                                                           | 5290                 | 91.84               | -                       | -                           | 85.03                   | 31.87                         | 6.09                   | 31.15                      | 100                  | 231                     | A                     | V             |
|                                       |                                                                                             | 5362.08              | 57.47               | -16.53                  | 74                          | 50.56                   | 31.92                         | 6.14                   | 31.15                      | 100                  | 231                     | P                     | V             |
|                                       |                                                                                             | 5360.4               | 46.68               | -7.32                   | 54                          | 39.78                   | 31.91                         | 6.14                   | 31.15                      | 100                  | 231                     | A                     | V             |
| Remark                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |

**Band 2 5250~5350MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                   | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac<br>VHT80<br>CH 58<br>5290MHz |                                                                                             | 10580                | 47.75               | -20.45                  | 68.2                        | 58.17                   | 40.17                         | 9.9                    | 60.49                      | 100                  | 0                       | P                     | H             |
|                                       |                                                                                             | 15870                | 45.94               | -28.06                  | 74                          | 53.33                   | 37.84                         | 12.35                  | 57.58                      | 100                  | 0                       | P                     | H             |
|                                       |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                       |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                       |                                                                                             | 10580                | 48.72               | -19.48                  | 68.2                        | 59.14                   | 40.17                         | 9.9                    | 60.49                      | 100                  | 0                       | P                     | V             |
|                                       |                                                                                             | 15870                | 45.79               | -28.21                  | 74                          | 53.18                   | 37.84                         | 12.35                  | 57.58                      | 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 3 - 5470~5725MHz

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

| WIFI                         | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|------------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                         |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1+2                          |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a<br>CH 100<br>5500MHz |      | 5459.12   | 59.35      | -14.65 | 74         | 52.32    | 31.97    | 6.21   | 31.15  | 271    | 160     | P       | H       |
|                              |      | 5468.08   | 66.76      | -1.44  | 68.2       | 59.7     | 31.98    | 6.23   | 31.15  | 271    | 160     | P       | H       |
|                              |      | 5459.12   | 45.05      | -8.95  | 54         | 38.02    | 31.97    | 6.21   | 31.15  | 271    | 160     | A       | H       |
|                              | *    | 5500      | 116.11     | -      | -          | 109.02   | 32       | 6.24   | 31.15  | 271    | 160     | P       | H       |
|                              | *    | 5500      | 105.17     | -      | -          | 98.08    | 32       | 6.24   | 31.15  | 271    | 160     | A       | H       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |      | 5459.92   | 52.93      | -21.07 | 74         | 45.9     | 31.97    | 6.21   | 31.15  | 100    | 235     | P       | V       |
|                              |      | 5468.4    | 61.88      | -6.32  | 68.2       | 54.82    | 31.98    | 6.23   | 31.15  | 100    | 235     | P       | V       |
|                              |      | 5459.12   | 41.18      | -12.82 | 54         | 34.15    | 31.97    | 6.21   | 31.15  | 100    | 235     | A       | V       |
|                              | *    | 5500      | 111.2      | -      | -          | 104.11   | 32       | 6.24   | 31.15  | 100    | 235     | P       | V       |
|                              | *    | 5500      | 100.35     | -      | -          | 93.26    | 32       | 6.24   | 31.15  | 100    | 235     | A       | V       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |
| 802.11a<br>CH 116<br>5580MHz |      | 5452.24   | 52.19      | -21.81 | 74         | 45.16    | 31.97    | 6.21   | 31.15  | 265    | 158     | P       | H       |
|                              |      | 5467.12   | 54.26      | -13.94 | 68.2       | 47.2     | 31.98    | 6.23   | 31.15  | 265    | 158     | P       | H       |
|                              |      | 5424.16   | 39.97      | -14.03 | 54         | 32.99    | 31.95    | 6.18   | 31.15  | 265    | 158     | A       | H       |
|                              | *    | 5580      | 121.42     | -      | -          | 114.2    | 32.1     | 6.32   | 31.2   | 265    | 158     | P       | H       |
|                              | *    | 5580      | 110.84     | -      | -          | 103.62   | 32.1     | 6.32   | 31.2   | 265    | 158     | A       | H       |
|                              |      | 5736.65   | 49.84      | -18.36 | 68.2       | 42.4     | 32.34    | 6.37   | 31.27  | 265    | 158     | P       | H       |
|                              |      | 5423.2    | 49.27      | -24.73 | 74         | 42.29    | 31.95    | 6.18   | 31.15  | 100    | 236     | P       | V       |
|                              |      | 5468.08   | 50.29      | -17.91 | 68.2       | 43.23    | 31.98    | 6.23   | 31.15  | 100    | 236     | P       | V       |
|                              |      | 5423.92   | 38.53      | -15.47 | 54         | 31.55    | 31.95    | 6.18   | 31.15  | 100    | 236     | A       | V       |
|                              | *    | 5580      | 117.25     | -      | -          | 110.03   | 32.1     | 6.32   | 31.2   | 100    | 236     | P       | V       |
|                              | *    | 5580      | 106.22     | -      | -          | 99       | 32.1     | 6.32   | 31.2   | 100    | 236     | A       | V       |
|                              |      | 5730.665  | 49.1       | -19.1  | 68.2       | 41.69    | 32.31    | 6.37   | 31.27  | 100    | 236     | P       | V       |



|                                                   |                                                                                             |         |        |       |      |        |       |      |       |     |     |   |   |
|---------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|-------|------|--------|-------|------|-------|-----|-----|---|---|
| <b>802.11a</b><br><b>CH 140</b><br><b>5700MHz</b> | *                                                                                           | 5700    | 114.83 | -     | -    | 107.45 | 32.27 | 6.36 | 31.25 | 261 | 168 | P | H |
|                                                   | *                                                                                           | 5700    | 104.22 | -     | -    | 96.84  | 32.27 | 6.36 | 31.25 | 261 | 168 | A | H |
|                                                   |                                                                                             | 5725.56 | 66.39  | -1.81 | 68.2 | 58.97  | 32.31 | 6.37 | 31.26 | 261 | 168 | P | H |
|                                                   |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | H |
|                                                   |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | H |
|                                                   |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | H |
|                                                   | *                                                                                           | 5700    | 111.49 | -     | -    | 104.11 | 32.27 | 6.36 | 31.25 | 275 | 178 | P | V |
|                                                   | *                                                                                           | 5700    | 101.15 | -     | -    | 93.77  | 32.27 | 6.36 | 31.25 | 275 | 178 | A | V |
|                                                   |                                                                                             | 5725.16 | 65.15  | -3.05 | 68.2 | 57.73  | 32.31 | 6.37 | 31.26 | 275 | 178 | P | V |
|                                                   |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | V |
|                                                   |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | V |
|                                                   |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | V |
| <b>Remark</b>                                     | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |       |      |        |       |      |       |     |     |   |   |



**Band 3 - 5470~5725MHz**  
**WIFI 802.11a (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2          | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11a<br>CH 100<br>5500MHz |                                                                                             | 11000                | 47.81               | -26.19                  | 74                          | 58.73                   | 40.5                          | 10.08                  | 61.5                       | 100                  | 0                       | P                     | H             |
|                              |                                                                                             | 16500                | 43.86               | -24.34                  | 68.2                        | 49.07                   | 39.6                          | 12.49                  | 57.3                       | 100                  | 0                       | P                     | H             |
|                              |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                              |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                              |                                                                                             | 11000                | 47.95               | -26.05                  | 74                          | 58.87                   | 40.5                          | 10.08                  | 61.5                       | 100                  | 0                       | P                     | V             |
|                              |                                                                                             | 16500                | 43.68               | -24.52                  | 68.2                        | 48.89                   | 39.6                          | 12.49                  | 57.3                       | 100                  | 0                       | P                     | V             |
|                              |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                              |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| 802.11a<br>CH 116<br>5580MHz |                                                                                             | 11160                | 56.17               | -17.83                  | 74                          | 67.17                   | 40.37                         | 10.16                  | 61.53                      | 200                  | 160                     | P                     | H             |
|                              |                                                                                             | 11160                | 42.33               | -11.67                  | 54                          | 53.33                   | 40.37                         | 10.16                  | 61.53                      | 200                  | 160                     | A                     | H             |
|                              |                                                                                             | 16740                | 50.9                | -17.3                   | 68.2                        | 55.07                   | 40.13                         | 12.52                  | 56.82                      | 100                  | 0                       | P                     | H             |
|                              |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                              |                                                                                             | 11160                | 53.96               | -20.04                  | 74                          | 64.96                   | 40.37                         | 10.16                  | 61.53                      | 204                  | 184                     | P                     | V             |
|                              |                                                                                             | 11160                | 40.44               | -13.56                  | 54                          | 51.44                   | 40.37                         | 10.16                  | 61.53                      | 204                  | 184                     | A                     | V             |
|                              |                                                                                             | 16740                | 50.24               | -17.96                  | 68.2                        | 54.41                   | 40.13                         | 12.52                  | 56.82                      | 100                  | 0                       | P                     | V             |
|                              |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| 802.11a<br>CH 140<br>5700MHz |                                                                                             | 11400                | 46.23               | -27.77                  | 74                          | 57.34                   | 40.18                         | 10.29                  | 61.58                      | 100                  | 0                       | P                     | H             |
|                              |                                                                                             | 17100                | 47.28               | -20.92                  | 68.2                        | 49.66                   | 41.06                         | 12.64                  | 56.08                      | 100                  | 0                       | P                     | H             |
|                              |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                              |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                              |                                                                                             | 11400                | 46.68               | -27.32                  | 74                          | 57.79                   | 40.18                         | 10.29                  | 61.58                      | 100                  | 0                       | P                     | V             |
|                              |                                                                                             | 17100                | 47.3                | -20.9                   | 68.2                        | 49.68                   | 41.06                         | 12.64                  | 56.08                      | 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 3 - 5470~5725MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1+2                            | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|------------------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11n<br/>HT20<br/>CH 100<br/>5500MHz</b> |      | 5456.56              | 55.02               | -18.98                  | 74                          | 47.99                     | 31.97                         | 6.21                   | 31.15                      | 270                  | 157                     | P                       | H               |
|                                                |      | 5470                 | 66.95               | -1.25                   | 68.2                        | 59.89                     | 31.98                         | 6.23                   | 31.15                      | 270                  | 157                     | P                       | H               |
|                                                |      | 5456.24              | 41.77               | -12.23                  | 54                          | 34.74                     | 31.97                         | 6.21                   | 31.15                      | 270                  | 157                     | A                       | H               |
|                                                | *    | 5500                 | 115.79              | -                       | -                           | 108.7                     | 32                            | 6.24                   | 31.15                      | 270                  | 157                     | P                       | H               |
|                                                | *    | 5500                 | 104.38              | -                       | -                           | 97.29                     | 32                            | 6.24                   | 31.15                      | 270                  | 157                     | A                       | H               |
|                                                |      |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                                |      | 5442.32              | 50.15               | -23.85                  | 74                          | 43.15                     | 31.96                         | 6.19                   | 31.15                      | 100                  | 225                     | P                       | V               |
|                                                |      | 5468.56              | 60.62               | -7.58                   | 68.2                        | 53.56                     | 31.98                         | 6.23                   | 31.15                      | 100                  | 225                     | P                       | V               |
|                                                |      | 5424.08              | 38.52               | -15.48                  | 54                          | 31.54                     | 31.95                         | 6.18                   | 31.15                      | 100                  | 225                     | A                       | V               |
|                                                | *    | 5500                 | 109.6               | -                       | -                           | 102.51                    | 32                            | 6.24                   | 31.15                      | 100                  | 225                     | P                       | V               |
|                                                | *    | 5500                 | 98.63               | -                       | -                           | 91.54                     | 32                            | 6.24                   | 31.15                      | 100                  | 225                     | A                       | V               |
|                                                |      |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| <b>802.11n<br/>HT20<br/>CH 116<br/>5580MHz</b> |      | 5459.2               | 54.86               | -19.14                  | 74                          | 47.83                     | 31.97                         | 6.21                   | 31.15                      | 272                  | 172                     | P                       | H               |
|                                                |      | 5461.84              | 54.42               | -13.78                  | 68.2                        | 47.39                     | 31.97                         | 6.21                   | 31.15                      | 272                  | 172                     | P                       | H               |
|                                                |      | 5423.92              | 41.46               | -12.54                  | 54                          | 34.48                     | 31.95                         | 6.18                   | 31.15                      | 272                  | 172                     | A                       | H               |
|                                                | *    | 5580                 | 121.35              | -                       | -                           | 114.13                    | 32.1                          | 6.32                   | 31.2                       | 272                  | 172                     | P                       | H               |
|                                                | *    | 5580                 | 109.07              | -                       | -                           | 101.85                    | 32.1                          | 6.32                   | 31.2                       | 272                  | 172                     | A                       | H               |
|                                                |      | 5746.73              | 49.85               | -18.35                  | 68.2                        | 42.41                     | 32.34                         | 6.37                   | 31.27                      | 272                  | 172                     | P                       | H               |
|                                                |      | 5458.24              | 50.51               | -23.49                  | 74                          | 43.48                     | 31.97                         | 6.21                   | 31.15                      | 270                  | 177                     | P                       | V               |
|                                                |      | 5464.96              | 50.09               | -18.11                  | 68.2                        | 43.05                     | 31.98                         | 6.21                   | 31.15                      | 270                  | 177                     | P                       | V               |
|                                                |      | 5423.92              | 38.21               | -15.79                  | 54                          | 31.23                     | 31.95                         | 6.18                   | 31.15                      | 270                  | 177                     | A                       | V               |
|                                                | *    | 5580                 | 116.47              | -                       | -                           | 109.25                    | 32.1                          | 6.32                   | 31.2                       | 270                  | 177                     | P                       | V               |
|                                                | *    | 5580                 | 104.24              | -                       | -                           | 97.02                     | 32.1                          | 6.32                   | 31.2                       | 270                  | 177                     | A                       | V               |
|                                                |      | 5740.115             | 50.18               | -18.02                  | 68.2                        | 42.74                     | 32.34                         | 6.37                   | 31.27                      | 270                  | 177                     | P                       | V               |



|                                                |                                                                                             |         |        |       |      |        |       |      |       |     |     |   |   |
|------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|-------|------|--------|-------|------|-------|-----|-----|---|---|
| <b>802.11n<br/>HT20<br/>CH 140<br/>5700MHz</b> | *                                                                                           | 5700    | 113.43 | -     | -    | 106.05 | 32.27 | 6.36 | 31.25 | 263 | 128 | P | H |
|                                                | *                                                                                           | 5700    | 102    | -     | -    | 94.62  | 32.27 | 6.36 | 31.25 | 263 | 128 | A | H |
|                                                |                                                                                             | 5725.16 | 65.69  | -2.51 | 68.2 | 58.27  | 32.31 | 6.37 | 31.26 | 263 | 128 | P | H |
|                                                |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | H |
|                                                |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | H |
|                                                |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | H |
|                                                | *                                                                                           | 5700    | 110.88 | -     | -    | 103.5  | 32.27 | 6.36 | 31.25 | 286 | 181 | P | V |
|                                                | *                                                                                           | 5700    | 99.19  | -     | -    | 91.81  | 32.27 | 6.36 | 31.25 | 286 | 181 | A | V |
|                                                |                                                                                             | 5725.08 | 60.53  | -7.67 | 68.2 | 53.11  | 32.31 | 6.37 | 31.26 | 286 | 181 | P | V |
|                                                |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | V |
|                                                |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | V |
|                                                |                                                                                             |         |        |       |      |        |       |      |       |     |     |   | V |
| <b>Remark</b>                                  | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |       |      |        |       |      |       |     |     |   |   |



**Band 3 - 5470~5725MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                  | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11n<br>HT20<br>CH 100<br>5500MHz |                                                                                             | 11000                | 47.84               | -26.16                  | 74                          | 58.76                   | 40.5                          | 10.08                  | 61.5                       | 100                  | 0                       | P                     | H             |
|                                      |                                                                                             | 16500                | 44.32               | -23.88                  | 68.2                        | 49.53                   | 39.6                          | 12.49                  | 57.3                       | 100                  | 0                       | P                     | H             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                      |                                                                                             | 11000                | 47.14               | -26.86                  | 74                          | 58.06                   | 40.5                          | 10.08                  | 61.5                       | 100                  | 0                       | P                     | V             |
|                                      |                                                                                             | 16500                | 44.08               | -24.12                  | 68.2                        | 49.29                   | 39.6                          | 12.49                  | 57.3                       | 100                  | 0                       | P                     | V             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| 802.11n<br>HT20<br>CH 116<br>5580MHz |                                                                                             | 11160                | 56.34               | -17.66                  | 74                          | 67.34                   | 40.37                         | 10.16                  | 61.53                      | 202                  | 162                     | P                     | H             |
|                                      |                                                                                             | 11160                | 41.06               | -12.94                  | 54                          | 52.06                   | 40.37                         | 10.16                  | 61.53                      | 202                  | 162                     | A                     | H             |
|                                      |                                                                                             | 16740                | 50.4                | -17.8                   | 68.2                        | 54.57                   | 40.13                         | 12.52                  | 56.82                      | 100                  | 0                       | P                     | H             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                      |                                                                                             | 11160                | 49.58               | -24.42                  | 74                          | 60.58                   | 40.37                         | 10.16                  | 61.53                      | 100                  | 0                       | P                     | V             |
|                                      |                                                                                             | 16740                | 50.26               | -17.94                  | 68.2                        | 54.43                   | 40.13                         | 12.52                  | 56.82                      | 100                  | 0                       | P                     | V             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | V             |
| 802.11n<br>HT20<br>CH 140<br>5700MHz |                                                                                             | 11400                | 46.17               | -27.83                  | 74                          | 57.28                   | 40.18                         | 10.29                  | 61.58                      | 100                  | 0                       | P                     | H             |
|                                      |                                                                                             | 17100                | 46.42               | -21.78                  | 68.2                        | 48.8                    | 41.06                         | 12.64                  | 56.08                      | 100                  | 0                       | P                     | H             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                      |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                      |                                                                                             | 11400                | 45.98               | -28.02                  | 74                          | 57.09                   | 40.18                         | 10.29                  | 61.58                      | 100                  | 0                       | P                     | V             |
|                                      |                                                                                             | 17100                | 46.99               | -21.21                  | 68.2                        | 49.37                   | 41.06                         | 12.64                  | 56.08                      | 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 3 - 5470~5725MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1+2                            | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|------------------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11n<br/>HT40<br/>CH 102<br/>5510MHz</b> |      | 5457.28              | 64.71               | -9.29                   | 74                          | 57.68                     | 31.97                         | 6.21                   | 31.15                      | 267                  | 157                     | P                       | H               |
|                                                |      | 5470                 | 67.09               | -1.11                   | 68.2                        | 60.03                     | 31.98                         | 6.23                   | 31.15                      | 267                  | 157                     | P                       | H               |
|                                                |      | 5459.92              | 51.47               | -2.53                   | 54                          | 44.44                     | 31.97                         | 6.21                   | 31.15                      | 267                  | 157                     | A                       | H               |
|                                                | *    | 5510                 | 110.94              | -                       | -                           | 103.84                    | 32                            | 6.26                   | 31.16                      | 267                  | 157                     | P                       | H               |
|                                                | *    | 5510                 | 100.46              | -                       | -                           | 93.36                     | 32                            | 6.26                   | 31.16                      | 267                  | 157                     | A                       | H               |
|                                                |      | 5749.88              | 50.18               | -18.02                  | 68.2                        | 42.74                     | 32.34                         | 6.37                   | 31.27                      | 267                  | 157                     | P                       | H               |
|                                                |      | 5458.72              | 59.21               | -14.79                  | 74                          | 52.18                     | 31.97                         | 6.21                   | 31.15                      | 100                  | 236                     | P                       | V               |
|                                                |      | 5461.84              | 61.11               | -7.09                   | 68.2                        | 54.08                     | 31.97                         | 6.21                   | 31.15                      | 100                  | 236                     | P                       | V               |
|                                                |      | 5459.92              | 46.07               | -7.93                   | 54                          | 39.04                     | 31.97                         | 6.21                   | 31.15                      | 100                  | 236                     | A                       | V               |
|                                                | *    | 5510                 | 106.83              | -                       | -                           | 99.73                     | 32                            | 6.26                   | 31.16                      | 100                  | 236                     | P                       | V               |
|                                                | *    | 5510                 | 95.8                | -                       | -                           | 88.7                      | 32                            | 6.26                   | 31.16                      | 100                  | 236                     | A                       | V               |
|                                                |      | 5748.305             | 49.33               | -18.87                  | 68.2                        | 41.89                     | 32.34                         | 6.37                   | 31.27                      | 100                  | 236                     | P                       | V               |
| <b>802.11n<br/>HT40<br/>CH 110<br/>5550MHz</b> |      | 5446                 | 60.99               | -13.01                  | 74                          | 53.98                     | 31.97                         | 6.19                   | 31.15                      | 273                  | 172                     | P                       | H               |
|                                                |      | 5467.12              | 64.04               | -4.16                   | 68.2                        | 56.98                     | 31.98                         | 6.23                   | 31.15                      | 273                  | 172                     | P                       | H               |
|                                                |      | 5457.52              | 49.86               | -4.14                   | 54                          | 42.83                     | 31.97                         | 6.21                   | 31.15                      | 273                  | 172                     | A                       | H               |
|                                                | *    | 5550                 | 116.84              | -                       | -                           | 109.65                    | 32.07                         | 6.29                   | 31.17                      | 273                  | 172                     | P                       | H               |
|                                                | *    | 5550                 | 106.13              | -                       | -                           | 98.94                     | 32.07                         | 6.29                   | 31.17                      | 273                  | 172                     | A                       | H               |
|                                                |      | 5748.305             | 50.79               | -17.41                  | 68.2                        | 43.35                     | 32.34                         | 6.37                   | 31.27                      | 273                  | 172                     | P                       | H               |
|                                                |      | 5456.32              | 58.11               | -15.89                  | 74                          | 51.08                     | 31.97                         | 6.21                   | 31.15                      | 273                  | 181                     | P                       | V               |
|                                                |      | 5466.64              | 61.47               | -6.73                   | 68.2                        | 54.41                     | 31.98                         | 6.23                   | 31.15                      | 273                  | 181                     | P                       | V               |
|                                                |      | 5456.8               | 47.51               | -6.49                   | 54                          | 40.48                     | 31.97                         | 6.21                   | 31.15                      | 273                  | 181                     | A                       | V               |
|                                                | *    | 5550                 | 111.81              | -                       | -                           | 104.62                    | 32.07                         | 6.29                   | 31.17                      | 273                  | 181                     | P                       | V               |
|                                                | *    | 5550                 | 101.1               | -                       | -                           | 93.91                     | 32.07                         | 6.29                   | 31.17                      | 273                  | 181                     | A                       | V               |
|                                                |      | 5736.335             | 49.77               | -18.43                  | 68.2                        | 42.33                     | 32.34                         | 6.37                   | 31.27                      | 273                  | 181                     | P                       | V               |



|                                                                  |                                                                                             |          |        |        |      |        |       |      |       |     |     |   |   |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------|--------|--------|------|--------|-------|------|-------|-----|-----|---|---|
| <b>802.11n</b><br><b>HT40</b><br><b>CH 134</b><br><b>5670MHz</b> |                                                                                             | 5412.65  | 50.05  | -23.95 | 74   | 43.07  | 31.95 | 6.18 | 31.15 | 259 | 167 | P | H |
|                                                                  |                                                                                             | 5459.9   | 48.28  | -25.72 | 74   | 41.25  | 31.97 | 6.21 | 31.15 | 259 | 167 | P | H |
|                                                                  |                                                                                             | 5423.85  | 41.57  | -12.43 | 54   | 34.59  | 31.95 | 6.18 | 31.15 | 259 | 167 | A | H |
|                                                                  | *                                                                                           | 5670     | 112.41 | -      | -    | 105.05 | 32.24 | 6.35 | 31.23 | 259 | 167 | P | H |
|                                                                  | *                                                                                           | 5670     | 102.12 | -      | -    | 94.76  | 32.24 | 6.35 | 31.23 | 259 | 167 | A | H |
|                                                                  |                                                                                             | 5729.125 | 65.43  | -2.77  | 68.2 | 58.01  | 32.31 | 6.37 | 31.26 | 259 | 167 | P | H |
|                                                                  |                                                                                             | 5389.9   | 49.51  | -24.49 | 74   | 42.58  | 31.93 | 6.15 | 31.15 | 263 | 180 | P | V |
|                                                                  |                                                                                             | 5463.05  | 48.15  | -20.05 | 68.2 | 41.11  | 31.98 | 6.21 | 31.15 | 263 | 180 | P | V |
|                                                                  |                                                                                             | 5423.85  | 38.78  | -15.22 | 54   | 31.8   | 31.95 | 6.18 | 31.15 | 263 | 180 | A | V |
|                                                                  | *                                                                                           | 5670     | 109.23 | -      | -    | 101.87 | 32.24 | 6.35 | 31.23 | 263 | 180 | P | V |
|                                                                  | *                                                                                           | 5670     | 98.85  | -      | -    | 91.49  | 32.24 | 6.35 | 31.23 | 263 | 180 | A | V |
|                                                                  |                                                                                             | 5729.125 | 60.71  | -7.49  | 68.2 | 53.29  | 32.31 | 6.37 | 31.26 | 263 | 180 | P | V |
| <b>Remark</b>                                                    | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |          |        |        |      |        |       |      |       |     |     |   |   |



**Band 3 - 5470~5725MHz**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                  | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT40<br>CH 102<br>5510MHz |                                                                                             | 11020                | 47.59               | -26.41                  | 74                          | 58.5                      | 40.49                         | 10.1                   | 61.5                       | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 16530                | 44.65               | -23.55                  | 68.2                        | 49.72                     | 39.68                         | 12.49                  | 57.24                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11020                | 47.97               | -26.03                  | 74                          | 58.88                     | 40.49                         | 10.1                   | 61.5                       | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 16530                | 44.49               | -23.71                  | 68.2                        | 49.56                     | 39.68                         | 12.49                  | 57.24                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11n<br>HT40<br>CH 110<br>5550MHz |                                                                                             | 11100                | 48.75               | -25.25                  | 74                          | 59.71                     | 40.42                         | 10.14                  | 61.52                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 16650                | 45.95               | -22.25                  | 68.2                        | 50.5                      | 39.94                         | 12.51                  | 57                         | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11100                | 47.55               | -26.45                  | 74                          | 58.51                     | 40.42                         | 10.14                  | 61.52                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 16650                | 46.94               | -21.26                  | 68.2                        | 51.49                     | 39.94                         | 12.51                  | 57                         | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11n<br>HT40<br>CH 134<br>5670MHz |                                                                                             | 11340                | 46.76               | -27.24                  | 74                          | 57.84                     | 40.23                         | 10.26                  | 61.57                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 17010                | 47.03               | -21.17                  | 68.2                        | 49.99                     | 40.76                         | 12.56                  | 56.28                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11340                | 47.04               | -26.96                  | 74                          | 58.12                     | 40.23                         | 10.26                  | 61.57                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 17010                | 46.5                | -21.7                   | 68.2                        | 49.46                     | 40.76                         | 12.56                  | 56.28                      | 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 3 - 5470~5725MHz

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

| WIFI<br>Ant.<br>1+2                    | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac<br>VHT80<br>CH 106<br>5530MHz |                                                                                             | 5458.72              | 63.69               | -10.31                  | 74                          | 56.66                   | 31.97                         | 6.21                   | 31.15                      | 268                  | 158                     | P                     | H             |
|                                        |                                                                                             | 5460.88              | 63.04               | -5.16                   | 68.2                        | 56.01                   | 31.97                         | 6.21                   | 31.15                      | 268                  | 158                     | P                     | H             |
|                                        |                                                                                             | 5457.76              | 52.47               | -1.53                   | 54                          | 45.44                   | 31.97                         | 6.21                   | 31.15                      | 268                  | 158                     | A                     | H             |
|                                        | *                                                                                           | 5530                 | 105.41              | -                       | -                           | 98.29                   | 32.02                         | 6.27                   | 31.17                      | 268                  | 158                     | P                     | H             |
|                                        | *                                                                                           | 5530                 | 94.83               | -                       | -                           | 87.71                   | 32.02                         | 6.27                   | 31.17                      | 268                  | 158                     | A                     | H             |
|                                        |                                                                                             | 5730.035             | 50.11               | -18.09                  | 68.2                        | 42.69                   | 32.31                         | 6.37                   | 31.26                      | 268                  | 158                     | P                     | H             |
|                                        |                                                                                             | 5441.2               | 57.63               | -16.37                  | 74                          | 50.63                   | 31.96                         | 6.19                   | 31.15                      | 100                  | 237                     | P                     | V             |
|                                        |                                                                                             | 5461.6               | 60.25               | -7.95                   | 68.2                        | 53.22                   | 31.97                         | 6.21                   | 31.15                      | 100                  | 237                     | P                     | V             |
|                                        |                                                                                             | 5459.92              | 46.63               | -7.37                   | 54                          | 39.6                    | 31.97                         | 6.21                   | 31.15                      | 100                  | 237                     | A                     | V             |
|                                        | *                                                                                           | 5530                 | 100.39              | -                       | -                           | 93.27                   | 32.02                         | 6.27                   | 31.17                      | 100                  | 237                     | P                     | V             |
|                                        | *                                                                                           | 5530                 | 89.59               | -                       | -                           | 82.47                   | 32.02                         | 6.27                   | 31.17                      | 100                  | 237                     | A                     | V             |
|                                        |                                                                                             | 5736.965             | 49.02               | -19.18                  | 68.2                        | 41.58                   | 32.34                         | 6.37                   | 31.27                      | 100                  | 237                     | P                     | V             |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |



## Band 3 5470~5725MHz

## WIFI 802.11ac VHT80 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1+2                    | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac<br>VHT80<br>CH 106<br>5530MHz |                                                                                             | 11060                | 47.41               | -26.59                  | 74                          | 58.35                   | 40.45                         | 10.12                  | 61.51                      | 100                  | 0                       | P                     | H             |
|                                        |                                                                                             | 16590                | 44.41               | -23.79                  | 68.2                        | 49.24                   | 39.79                         | 12.5                   | 57.12                      | 100                  | 0                       | P                     | H             |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                        |                                                                                             | 11060                | 46.68               | -27.32                  | 74                          | 57.62                   | 40.45                         | 10.12                  | 61.51                      | 100                  | 0                       | P                     | V             |
|                                        |                                                                                             | 16590                | 44.53               | -23.67                  | 68.2                        | 49.36                   | 39.79                         | 12.5                   | 57.12                      | 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 3 - Straddle Channel**  
**WIFI 802.11a (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1+2          | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11a<br>CH 144<br>5720MHz | *                                                                                           | 5720                 | 121.16              | -                       | -                           | 113.74                    | 32.31                         | 6.37                   | 31.26                      | 284                  | 165                     | P                       | H               |
|                              | *                                                                                           | 5720                 | 110                 | -                       | -                           | 102.58                    | 32.31                         | 6.37                   | 31.26                      | 284                  | 165                     | A                       | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                              | *                                                                                           | 5720                 | 117.53              | -                       | -                           | 110.11                    | 32.31                         | 6.37                   | 31.26                      | 273                  | 182                     | P                       | V               |
|                              | *                                                                                           | 5720                 | 106.35              | -                       | -                           | 98.93                     | 32.31                         | 6.37                   | 31.26                      | 273                  | 182                     | A                       | V               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
| Remark                       | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |

**Band 3 - Straddle Channel**  
**WIFI 802.11a (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2          | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11a<br>CH 144<br>5720MHz |                                                                                             | 11440                | 53.89               | -20.11                  | 74                          | 65.03                     | 40.15                         | 10.3                   | 61.59                      | 199                  | 150                     | P                       | H               |
|                              |                                                                                             | 11440                | 40.53               | -13.47                  | 54                          | 51.67                     | 40.15                         | 10.3                   | 61.59                      | 199                  | 150                     | A                       | H               |
|                              |                                                                                             | 17160                | 48.94               | -19.26                  | 68.2                        | 50.92                     | 41.3                          | 12.67                  | 55.95                      | 100                  | 0                       | P                       | H               |
|                              |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                              |                                                                                             | 11440                | 48.16               | -25.84                  | 74                          | 59.3                      | 40.15                         | 10.3                   | 61.59                      | 100                  | 0                       | P                       | V               |
|                              |                                                                                             | 17160                | 51.38               | -16.82                  | 68.2                        | 53.36                     | 41.3                          | 12.67                  | 55.95                      | 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 3 - Straddle Channel**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1+2                  | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 144<br>5720MHz | *                                                                                           | 5720                 | 120.64              | -                       | -                           | 113.22                    | 32.31                         | 6.37                   | 31.26                      | 274                  | 171                     | P                       | H               |
|                                      | *                                                                                           | 5720                 | 108.01              | -                       | -                           | 100.59                    | 32.31                         | 6.37                   | 31.26                      | 274                  | 171                     | A                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      | *                                                                                           | 5720                 | 117.69              | -                       | -                           | 110.27                    | 32.31                         | 6.37                   | 31.26                      | 255                  | 179                     | P                       | V               |
|                                      | *                                                                                           | 5720                 | 105.1               | -                       | -                           | 97.68                     | 32.31                         | 6.37                   | 31.26                      | 255                  | 179                     | A                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |

**Band 3 - Straddle Channel**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                  | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 144<br>5720MHz |                                                                                             | 11440                | 54.34               | -19.66                  | 74                          | 65.48                     | 40.15                         | 10.3                   | 61.59                      | 193                  | 155                     | P                       | H               |
|                                      |                                                                                             | 11440                | 39.11               | -14.89                  | 54                          | 50.25                     | 40.15                         | 10.3                   | 61.59                      | 193                  | 155                     | A                       | H               |
|                                      |                                                                                             | 17160                | 49.74               | -18.46                  | 68.2                        | 51.72                     | 41.3                          | 12.67                  | 55.95                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11440                | 49.55               | -24.45                  | 74                          | 60.69                     | 40.15                         | 10.3                   | 61.59                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 17160                | 50.17               | -18.03                  | 68.2                        | 52.15                     | 41.3                          | 12.67                  | 55.95                      | 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 3 - Straddle Channel**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1+2                  | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT40<br>CH 142<br>5710MHz | *                                                                                           | 5710                 | 118.99              | -                       | -                           | 111.6                     | 32.29                         | 6.36                   | 31.26                      | 275                  | 159                     | P                       | H               |
|                                      | *                                                                                           | 5710                 | 106.95              | -                       | -                           | 99.56                     | 32.29                         | 6.36                   | 31.26                      | 275                  | 159                     | A                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      | *                                                                                           | 5710                 | 114.58              | -                       | -                           | 107.19                    | 32.29                         | 6.36                   | 31.26                      | 258                  | 179                     | P                       | V               |
|                                      | *                                                                                           | 5710                 | 103.46              | -                       | -                           | 96.07                     | 32.29                         | 6.36                   | 31.26                      | 258                  | 179                     | A                       | V               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |

**Band 3 - Straddle Channel**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                  | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT40<br>CH 142<br>5710MHz |                                                                                             | 11420                | 48.5                | -25.5                   | 74                          | 59.62                     | 40.17                         | 10.29                  | 61.58                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             | 17130                | 48.07               | -20.13                  | 68.2                        | 50.24                     | 41.18                         | 12.66                  | 56.01                      | 100                  | 0                       | P                       | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                      |                                                                                             | 11420                | 47.62               | -26.38                  | 74                          | 58.74                     | 40.17                         | 10.29                  | 61.58                      | 100                  | 0                       | P                       | V               |
|                                      |                                                                                             | 17130                | 49.64               | -18.56                  | 68.2                        | 51.81                     | 41.18                         | 12.66                  | 56.01                      | 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 3 - Straddle Channel**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1+2                    | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac<br>VHT80<br>CH 138<br>5690MHz | *                                                                                           | 5690                 | 111.56              | -                       | -                           | 104.18                  | 32.27                         | 6.36                   | 31.25                      | 278                  | 172                     | P                     | H             |
|                                        | *                                                                                           | 5690                 | 100.77              | -                       | -                           | 93.39                   | 32.27                         | 6.36                   | 31.25                      | 278                  | 172                     | A                     | H             |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |
|                                        | *                                                                                           | 5690                 | 108.7               | -                       | -                           | 101.32                  | 32.27                         | 6.36                   | 31.25                      | 247                  | 180                     | P                     | V             |
|                                        | *                                                                                           | 5690                 | 97.67               | -                       | -                           | 90.29                   | 32.27                         | 6.36                   | 31.25                      | 247                  | 180                     | A                     | V             |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |

**Band 3 - Straddle Channel**  
**WIFI 802.11ac VHT80 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                    | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac<br>VHT80<br>CH 138<br>5690MHz |                                                                                             | 10380                | 46.76               | -21.44                  | 68.2                        | 57.11                   | 39.89                         | 9.8                    | 60.04                      | 100                  | 0                       | P                     | H             |
|                                        |                                                                                             | 17070                | 47.08               | -21.12                  | 68.2                        | 49.68                   | 40.94                         | 12.61                  | 56.15                      | 100                  | 0                       | P                     | H             |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                        |                                                                                             |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       | H             |
|                                        |                                                                                             | 10380                | 47.27               | -20.93                  | 68.2                        | 57.62                   | 39.89                         | 9.8                    | 60.04                      | 100                  | 0                       | P                     | V             |
|                                        |                                                                                             | 17070                | 46.61               | -21.59                  | 68.2                        | 49.21                   | 40.94                         | 12.61                  | 56.15                      | 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 2 - 5250~5350MHz

## Emission below 1GHz

## WIFI 802.11n HT20 (LF @ 3m)

| WIFI<br>Ant.<br>1+2   | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>LF |                                                                            | 30.27                | 25.85               | -14.15                  | 40                          | 29.39                     | 26.2                          | 0.44                   | 30.18                      | -                    | -                       | P                       | H               |
|                       |                                                                            | 86.16                | 25.48               | -14.52                  | 40                          | 40.6                      | 14.5                          | 0.82                   | 30.44                      | -                    | -                       | P                       | H               |
|                       |                                                                            | 209.82               | 28.42               | -15.08                  | 43.5                        | 41.11                     | 16.28                         | 1.33                   | 30.3                       | -                    | -                       | P                       | H               |
|                       |                                                                            | 309.1                | 27.16               | -18.84                  | 46                          | 35.77                     | 19.99                         | 1.53                   | 30.13                      | -                    | -                       | P                       | H               |
|                       |                                                                            | 857.9                | 32.35               | -13.65                  | 46                          | 30.31                     | 28.75                         | 2.49                   | 29.2                       | -                    | -                       | P                       | H               |
|                       |                                                                            | 921.6                | 33.42               | -12.58                  | 46                          | 30.36                     | 29.47                         | 2.67                   | 29.08                      | 100                  | 0                       | P                       | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            | 33.51                | 33.14               | -6.86                   | 40                          | 39.05                     | 23.88                         | 0.45                   | 30.24                      | 100                  | 0                       | P                       | V               |
|                       |                                                                            | 72.39                | 31.3                | -8.7                    | 40                          | 48.07                     | 12.95                         | 0.73                   | 30.45                      | -                    | -                       | P                       | V               |
|                       |                                                                            | 209.28               | 22.66               | -20.84                  | 43.5                        | 35.35                     | 16.28                         | 1.33                   | 30.3                       | -                    | -                       | P                       | V               |
|                       |                                                                            | 400.8                | 24.52               | -21.48                  | 46                          | 30.32                     | 22.52                         | 1.66                   | 29.98                      | -                    | -                       | P                       | V               |
|                       |                                                                            | 836.9                | 32.2                | -13.8                   | 46                          | 30.43                     | 28.55                         | 2.46                   | 29.24                      | -                    | -                       | P                       | V               |
|                       |                                                                            | 997.2                | 32.82               | -21.18                  | 54                          | 29                        | 29.91                         | 2.77                   | 28.86                      | -                    | -                       | P                       | V               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## Band 3 5470~5725MHz

## Emission below 1GHz

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

| WIFI<br>Ant.<br>1+2   | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT40<br>LF |                                                                            | 87.24                | 26.88               | -13.12                  | 40                          | 41.9                      | 14.6                          | 0.82                   | 30.44                      | 100                  | 0                       | P                       | H               |
|                       |                                                                            | 209.55               | 28.66               | -14.84                  | 43.5                        | 41.35                     | 16.28                         | 1.33                   | 30.3                       | -                    | -                       | P                       | H               |
|                       |                                                                            | 280.02               | 25.93               | -20.07                  | 46                          | 35.34                     | 19.3                          | 1.47                   | 30.18                      | -                    | -                       | P                       | H               |
|                       |                                                                            | 311.2                | 26.31               | -19.69                  | 46                          | 34.85                     | 20.05                         | 1.53                   | 30.12                      | -                    | -                       | P                       | H               |
|                       |                                                                            | 747.3                | 30.56               | -15.44                  | 46                          | 30.02                     | 27.64                         | 2.31                   | 29.41                      | -                    | -                       | P                       | H               |
|                       |                                                                            | 988.8                | 33.48               | -20.52                  | 54                          | 29.66                     | 29.95                         | 2.75                   | 28.88                      | -                    | -                       | P                       | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                       |                                                                            | 36.48                | 36.21               | -3.79                   | 40                          | 43.89                     | 22.14                         | 0.46                   | 30.28                      | 100                  | 0                       | P                       | V               |
|                       |                                                                            | 72.39                | 30.75               | -9.25                   | 40                          | 47.52                     | 12.95                         | 0.73                   | 30.45                      | -                    | -                       | P                       | V               |
|                       |                                                                            | 210.09               | 23.45               | -20.05                  | 43.5                        | 36.12                     | 16.3                          | 1.33                   | 30.3                       | -                    | -                       | P                       | V               |
|                       |                                                                            | 508.6                | 26.41               | -19.59                  | 46                          | 29.82                     | 24.46                         | 1.9                    | 29.77                      | -                    | -                       | P                       | V               |
|                       |                                                                            | 729.1                | 30.77               | -15.23                  | 46                          | 30.69                     | 27.25                         | 2.28                   | 29.45                      | -                    | -                       | P                       | V               |
|                       |                                                                            | 951                  | 33.79               | -12.21                  | 46                          | 29.95                     | 30.1                          | 2.73                   | 28.99                      | -                    | -                       | 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  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|---------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.    |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1+2     |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11b |      | 2390      | 55.45      | -18.55 | 74         | 54.51    | 32.22    | 4.58   | 35.86  | 103    | 308     | P       | H       |
| CH 01   |      |           |            |        |            |          |          |        |        |        |         |         |         |
| 2412MHz |      | 2390      | 43.54      | -10.46 | 54         | 42.6     | 32.22    | 4.58   | 35.86  | 103    | 308     | A       | H       |

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

**For Peak Limit @ 2390MHz:**

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

**For Average Limit @ 2390MHz:**

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

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





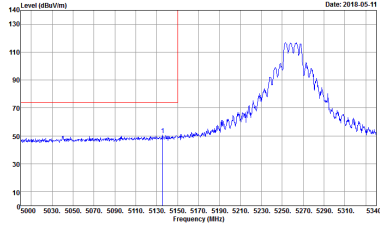
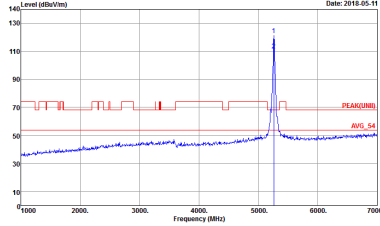
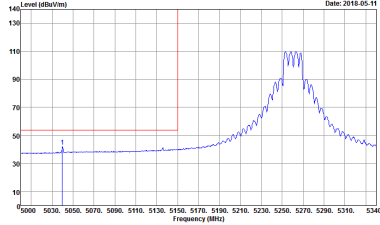
## Appendix D. Radiated Spurious Emission

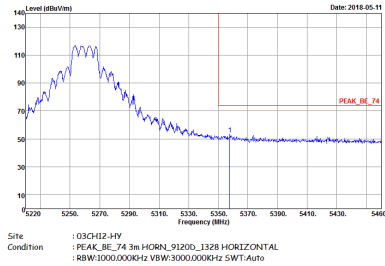
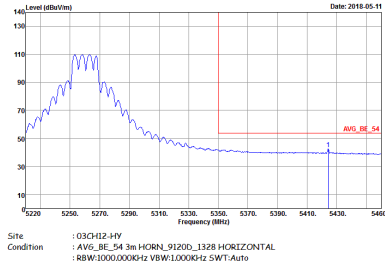
|                        |                                   |                            |         |
|------------------------|-----------------------------------|----------------------------|---------|
| <b>Test Engineer :</b> | Watt Tseng, Karl Hou, and Nick Yu | <b>Temperature :</b>       | 21~23°C |
|                        |                                   | <b>Relative Humidity :</b> | 59~62%  |

### Note symbol

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

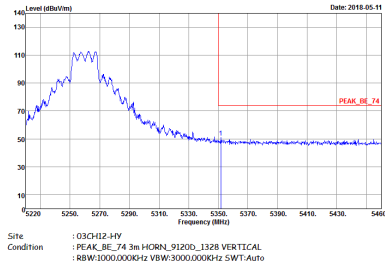
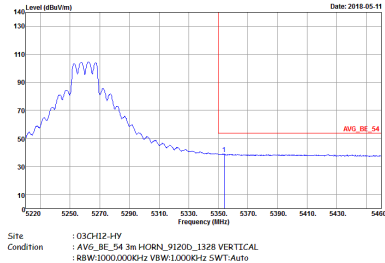
**Band 2 - 5250~5350MHz**  
**WIFI 802.11a (Band Edge @ 3m)**

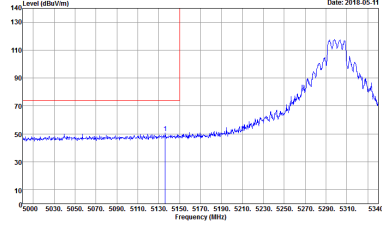
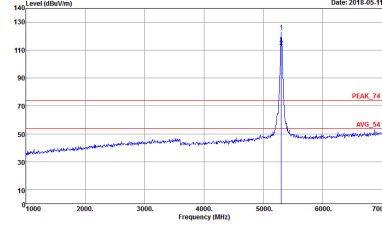
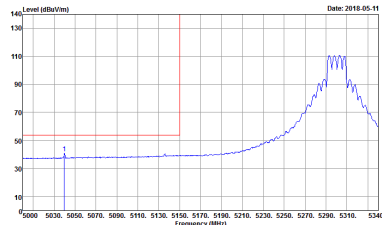
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                  |                                                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH52 5260MHz - L                                                                                                                                                                                            |                                                                                                                                                                                                                      |
| 1+2  | Horizontal                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                          |
| Peak |  <p>Site : 03CH12-HY<br/> Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/> Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/> Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/> : RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                           |

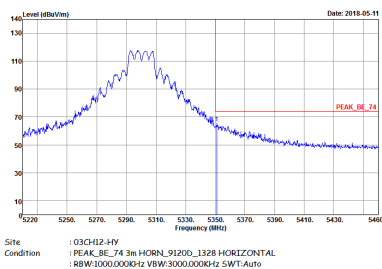
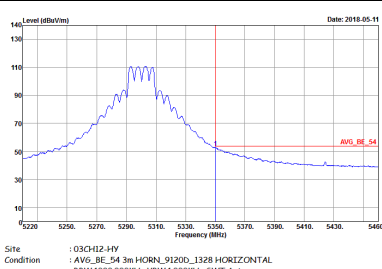
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                                   |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11a CH52 5260MHz - R                                                                                                                                                                                                             |             |
| 1+2  | Horizontal                                                                                                                                                                                                                           | Fundamental |
| Peak |  <p>Site: 03CH2-HY<br/>Condition: PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> <p>Date: 2018-05-11</p> | Left blank  |
| Avg. |  <p>Site: 03CH2-HY<br/>Condition: AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p> <p>Date: 2018-05-11</p>   | Left blank  |

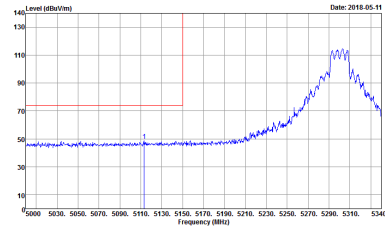
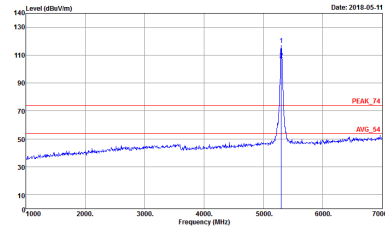
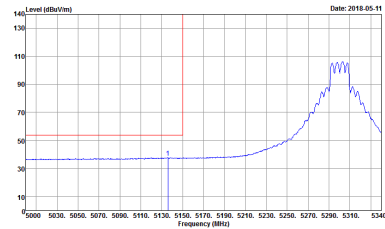


| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                            |                                                                                                                               |
|------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH52 5260MHz - L                                                                                                      |                                                                                                                               |
| 1+2  | Vertical                                                                                                                      | Fundamental                                                                                                                   |
| Peak | <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>     | Left blank                                                                                                                    |

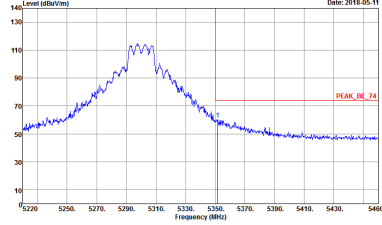
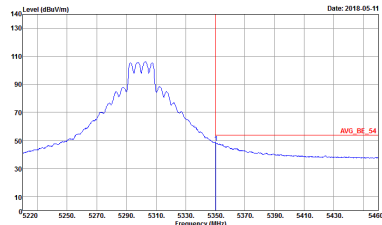
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |             |
|------|-------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11a CH52 5260MHz - R                                                            |             |
| 1+2  | Vertical                                                                            | Fundamental |
| Peak |    | Left blank  |
| Avg. |  | Left blank  |

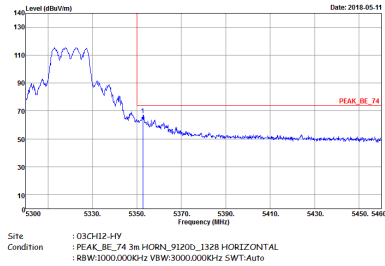
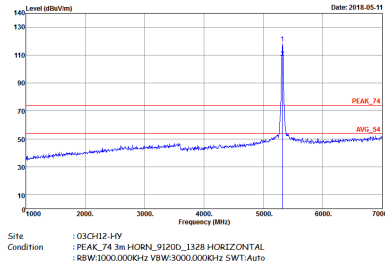
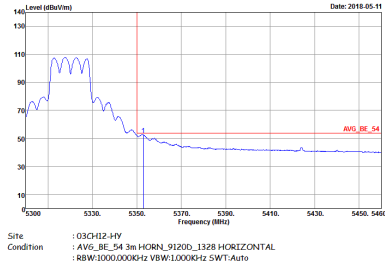
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                              |                                                                                                                                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH60 5300MHz - L                                                                                                                                                                                        |                                                                                                                                                                                                               |
| 1+2  | Horizontal                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                   |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK_T4 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                    |

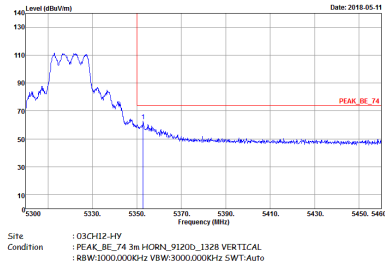
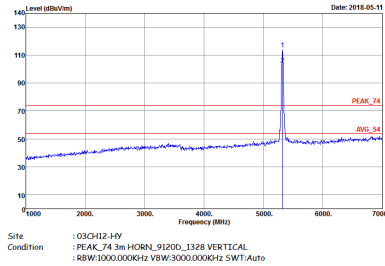
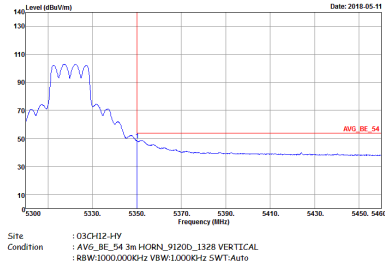
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |             |
|------|-------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11a CH60 5300MHz - R                                                            |             |
| 1+2  | Horizontal                                                                          | Fundamental |
| Peak |    | Left blank  |
| Avg. |  | Left blank  |

| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                            |                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH60 5300MHz - L                                                                                                                                                                                      |                                                                                                                                                                                                             |
| 1+2  | Vertical                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                 |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK_T4 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                  |



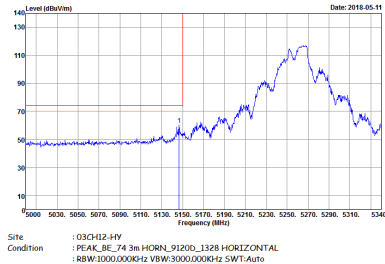
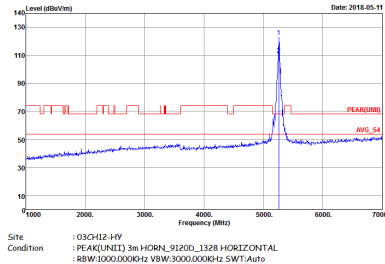
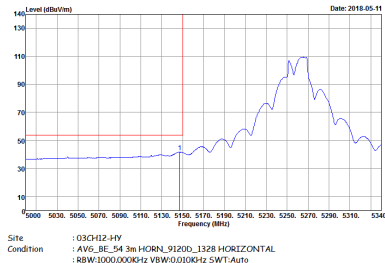
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                            |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11a CH60 5300MHz - R                                                                                                                                                                                      |             |
| 1+2  | Vertical                                                                                                                                                                                                      | Fundamental |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_64 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank  |

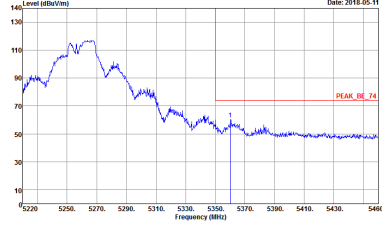
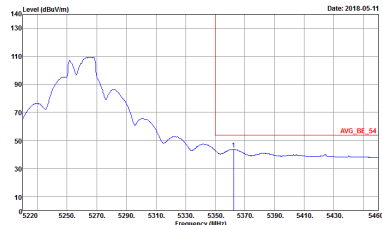
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |                                                                                    |
|------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| ANT  | 802.11a CH64 5320MHz                                                                |                                                                                    |
| 1+2  | Horizontal                                                                          | Fundamental                                                                        |
| Peak |    |  |
| Avg. |  | Left blank                                                                         |

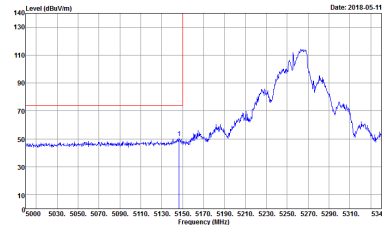
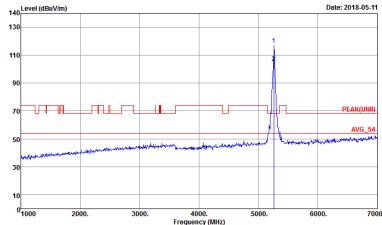
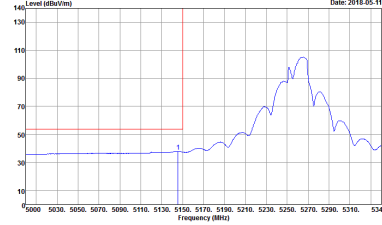
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |                                                                                    |
|------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| ANT  | 802.11a CH64 5320MHz                                                                |                                                                                    |
| 1+2  | Vertical                                                                            | Fundamental                                                                        |
| Peak |    |  |
| Avg. |  | Left blank                                                                         |

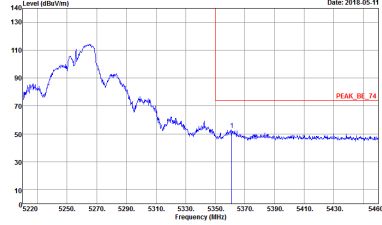
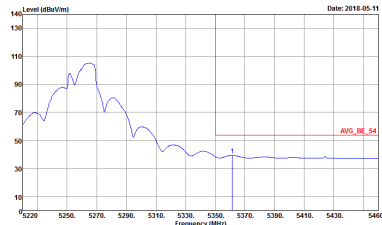


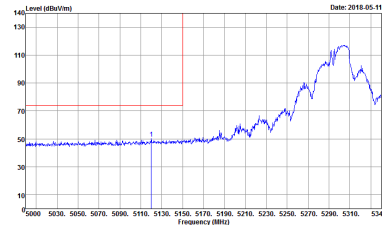
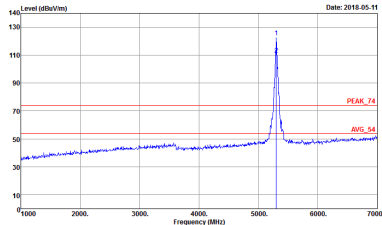
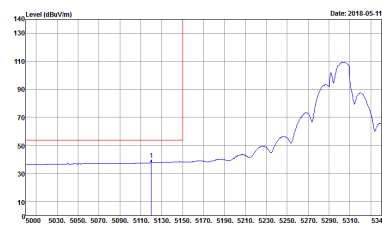
**Band 2 5250~5350MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                 |                                                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH52 5260MHz - L                                                                                                                                                                                      |                                                                                                                                                                                                                    |
| 1+2  | Horizontal                                                                                                                                                                                                         | Fundamental                                                                                                                                                                                                        |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                         |

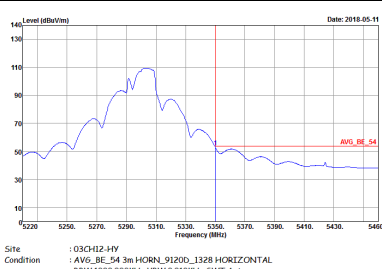
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                 |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT20 CH52 5260MHz - R                                                                                                                                                                                      |             |
| 1+2  | Horizontal                                                                                                                                                                                                         | Fundamental |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>  | Left blank  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_64 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1000.000KHz SWT:Auto</p> | Left blank  |

| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                            |                                                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH52 5260MHz - L                                                                                                                                                                                 |                                                                                                                                                                                                                |
| 1+2  | Vertical                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                    |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:1010KHz SWT:Auto</p>    | Left blank                                                                                                                                                                                                     |

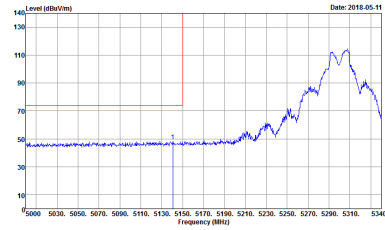
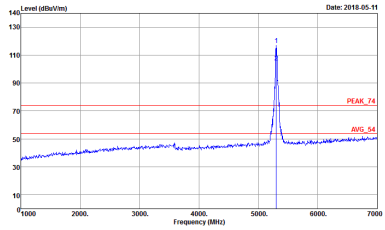
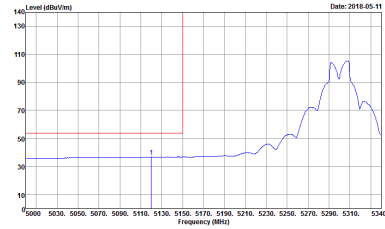
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                            |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT20 CH52 5260MHz - R                                                                                                                                                                                 |             |
| 1+2  | Vertical                                                                                                                                                                                                      | Fundamental |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:100.000KHz SWT:Auto</p> | Left blank  |

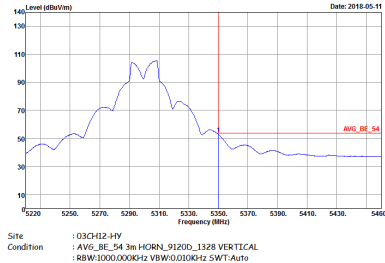
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                              |                                                                                                                                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH60 5300MHz - L                                                                                                                                                                                   |                                                                                                                                                                                                               |
| 1+2  | Horizontal                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                   |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK_T4 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000kHz VBW:10100kHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                    |



| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |            |
|------|-------------------------------------------------------------------------------------|------------|
| ANT  | 802.11n HT20 CH60 5300MHz - R                                                       |            |
| 1+2  | Horizontal                                                                          | Vertical   |
| Peak |    | Left blank |
| Avg. |  | Left blank |

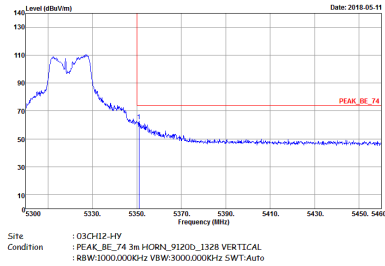
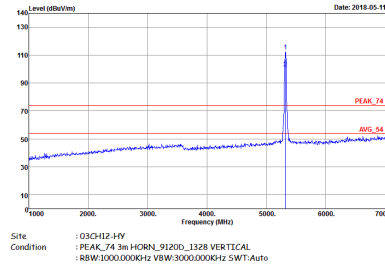
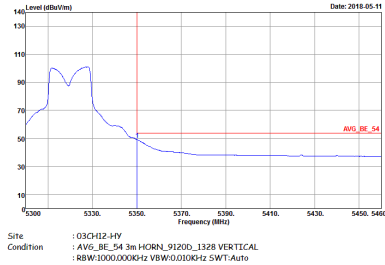


| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                                   |                                                                                                                                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH60 5300MHz - L                                                                                                                                                                                                        |                                                                                                                                                                                                                                   |
| 1+2  | Vertical                                                                                                                                                                                                                             | Fundamental                                                                                                                                                                                                                       |
| Peak |  <p>Site: 03CH12-HY<br/>Condition: PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> <p>Date: 2018-05-11</p>  |  <p>Site: 03CH12-HY<br/>Condition: PEAK_T4 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> <p>Date: 2018-05-11</p> |
| Avg. |  <p>Site: 03CH12-HY<br/>Condition: AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:1000.000KHz SWT:Auto</p> <p>Date: 2018-05-11</p> | Left blank                                                                                                                                                                                                                        |

| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                                   |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT20 CH60 5300MHz - R                                                                                                                                                                                                        |             |
| 1+2  | Vertical                                                                                                                                                                                                                             | Fundamental |
| Peak |  <p>Site: 03CH12-HY<br/>Condition: PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> <p>Date: 2018-05-11</p>  | Left blank  |
| Avg. |  <p>Site: 03CH12-HY<br/>Condition: AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:1000.000KHz SWT:Auto</p> <p>Date: 2018-05-11</p> | Left blank  |

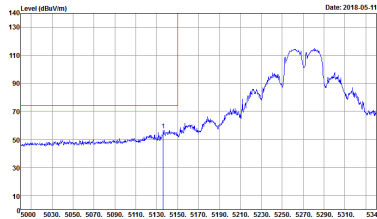
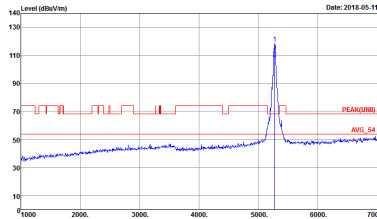
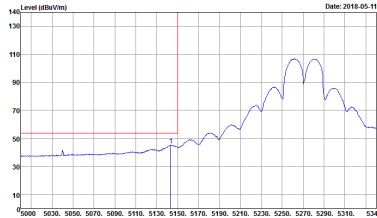


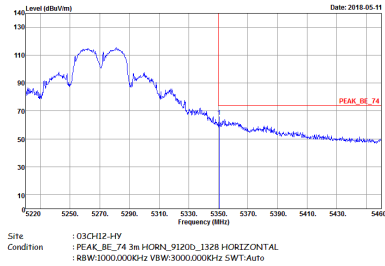
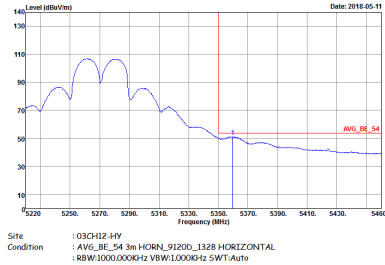
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                              |                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH64 5320MHz                                                                                                       |                                                                                                                              |
| 1+2  | Horizontal                                                                                                                      | Fundamental                                                                                                                  |
| Peak | <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> | <p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |
| Avg. | <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000kHz VBW:10100kHz SWT:Auto</p>     | Left blank                                                                                                                   |

| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |                                                                                    |
|------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH64 5320MHz                                                           |                                                                                    |
| 1+2  | Vertical                                                                            | Fundamental                                                                        |
| Peak |    |  |
|      |  | Left blank                                                                         |

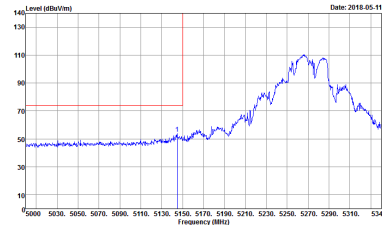
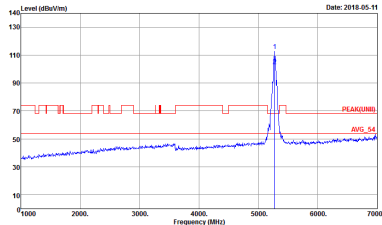
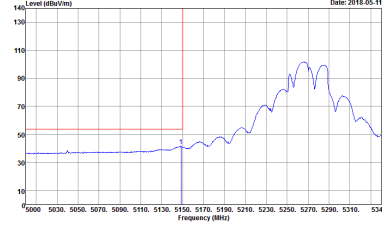


Band 2 5250~5350MHz  
WIFI 802.11n HT40 (Band Edge @ 3m)

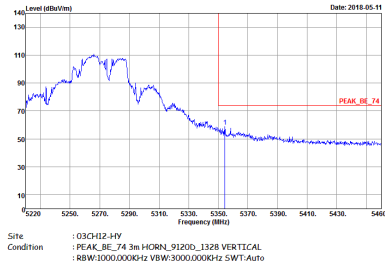
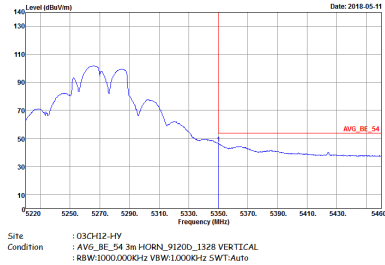
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                |                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH54 5270 - L                                                                                                                                                                                        |                                                                                                                                                                                                                    |
| 1+2  | Horizontal                                                                                                                                                                                                        | Fundamental                                                                                                                                                                                                        |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                         |

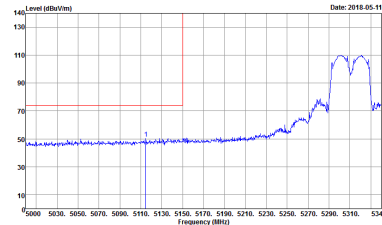
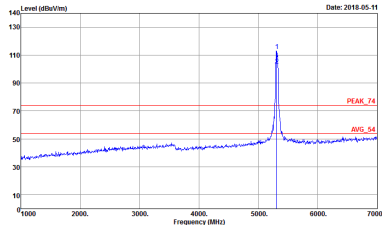
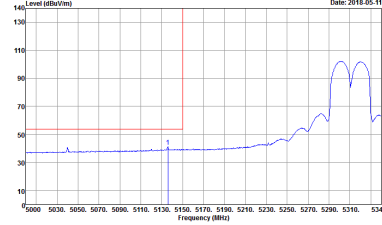
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |             |
|------|-------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH54 5270 - R                                                          |             |
| 1+2  | Horizontal                                                                          | Fundamental |
| Peak |    | Left blank  |
| Avg. |  | Left blank  |

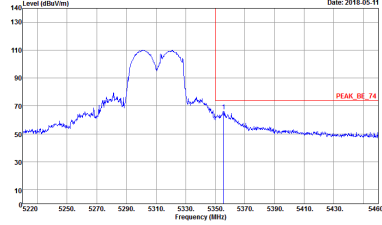
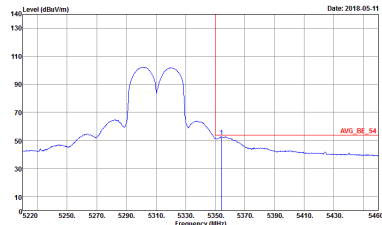


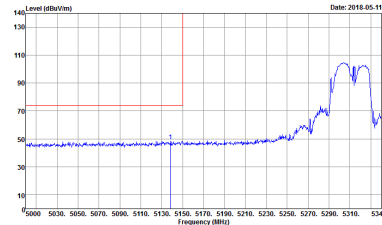
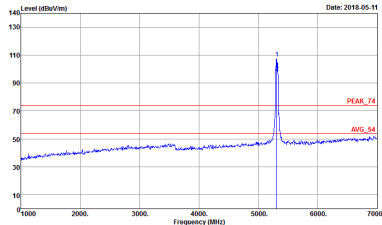
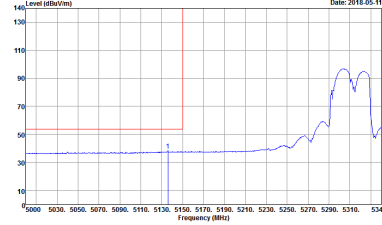
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                              |                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH54 5270 - L                                                                                                                                                                                      |                                                                                                                                                                                                                  |
| 1+2  | Vertical                                                                                                                                                                                                        | Vertical                                                                                                                                                                                                         |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
|      |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                       |

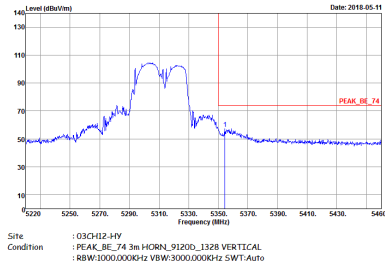
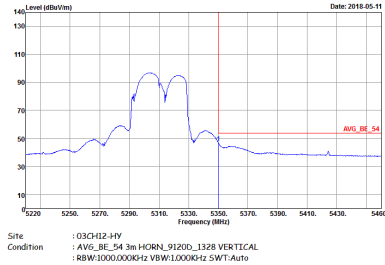


| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |            |
|------|-------------------------------------------------------------------------------------|------------|
| ANT  | 802.11n HT40 CH54 5270 - R                                                          |            |
| 1+2  | Vertical                                                                            | Vertical   |
| Peak |    | Left blank |
| Avg. |  | Left blank |

| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                              |                                                                                                                                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH62 5310 - L                                                                                                                                                                                      |                                                                                                                                                                                                               |
| 1+2  | Horizontal                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                   |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK_T4 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                    |

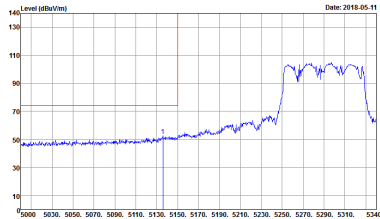
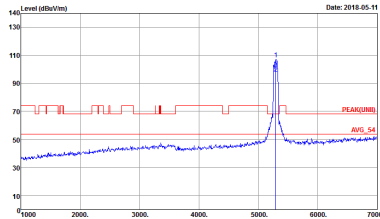
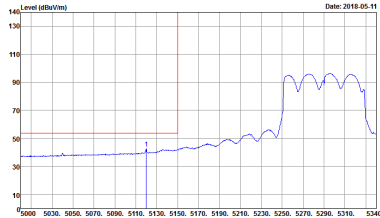
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                |             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH62 5310 - R                                                                                                                                                                                        |             |
| 1+2  | Horizontal                                                                                                                                                                                                        | Fundamental |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_64 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank  |

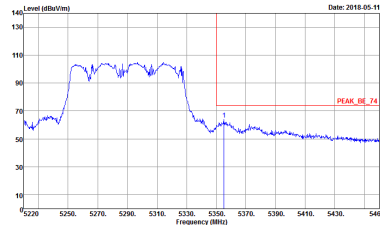
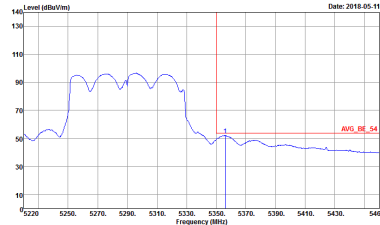
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                            |                                                                                                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH62 5310 - L                                                                                                                                                                                    |                                                                                                                                                                                                             |
| 1+2  | Vertical                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                 |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK_T4 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                  |

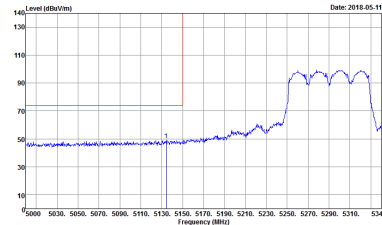
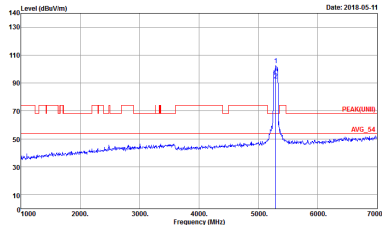
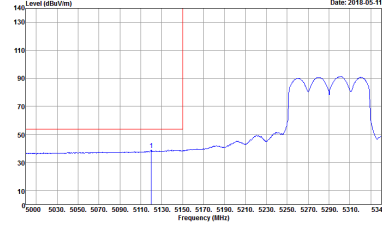
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                  |             |
|------|-------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH62 5310 - R                                                          |             |
| 1+2  | Vertical                                                                            | Fundamental |
| Peak |    | Left blank  |
| Avg. |  | Left blank  |



**Band 2 5250~5350MHz**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

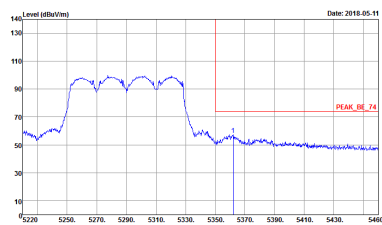
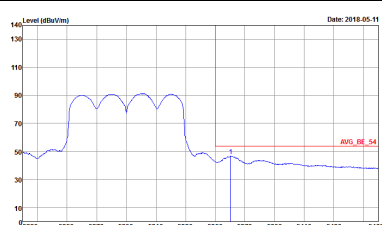
| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                |                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ac VHT80 CH58 5290MHz - L                                                                                                                                                                                   |                                                                                                                                                                                                                    |
| 1+2  | Horizontal                                                                                                                                                                                                        | Fundamental                                                                                                                                                                                                        |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                         |

| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                                |             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11ac VHT80 CH58 5290MHz - R                                                                                                                                                                                   |             |
| 1+2  | Horizontal                                                                                                                                                                                                        | Fundamental |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank  |

| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                            |                                                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ac VHT80 CH58 5290MHz - L                                                                                                                                                                               |                                                                                                                                                                                                                |
| 1+2  | Vertical                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                    |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                     |



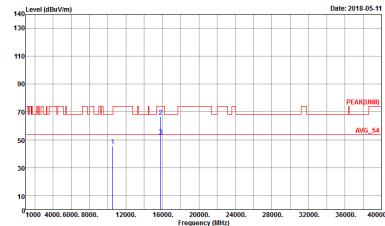
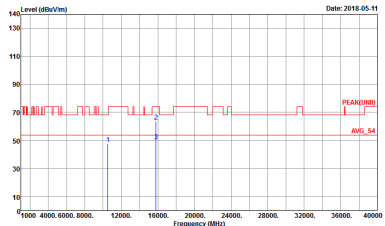


| WIFI | Band 2 5250~5350MHz Band Edge @ 3m                                                                                                                                                                              |             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11ac VHT80 CH58 5290MHz - R                                                                                                                                                                                 |             |
| 1+2  | Vertical                                                                                                                                                                                                        | Fundamental |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank  |



## Band 2 - 5250~5350MHz

## WIFI 802.11a (Harmonic @ 3m)

| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                                                                  |                                                                                                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH52 5260MHz                                                                                                                                               |                                                                                                                                                                   |
| 1+2          | Horizontal                                                                                                                                                         | Vertical                                                                                                                                                          |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL</p> |

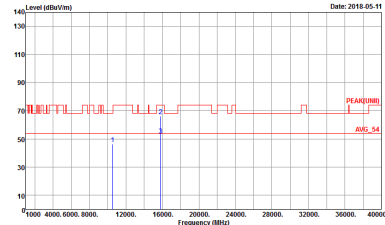
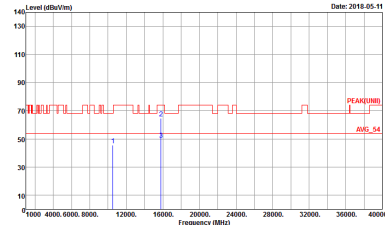


| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                                    |                                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH60 5300MHz                                                                                                                 |                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                           | Vertical                                                                                                                           |
| Peak<br>Avg. | <div><p>Level (dBm/1m)</p><p>Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL</p></div> | <div><p>Level (dBm/1m)</p><p>Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 VERTICAL</p></div> |



| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                              |                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH64 5320MHz                                                                                                           |                                                                                                                              |
| 1+2          | Horizontal                                                                                                                     | Vertical                                                                                                                     |
| Peak<br>Avg. | <div><p>Level (dBm/1m) Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL</p></div> | <div><p>Level (dBm/1m) Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 VERTICAL</p></div> |

**Band 2 5250~5350MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                                                                    |                                                                                                                                                                     |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH52 5260MHz                                                                                                                                            |                                                                                                                                                                     |
| 1+2          | Horizontal                                                                                                                                                           | Vertical                                                                                                                                                            |
| Peak<br>Avg. |  <p>Site : 03CH12-14Y<br/> Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-14Y<br/> Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |



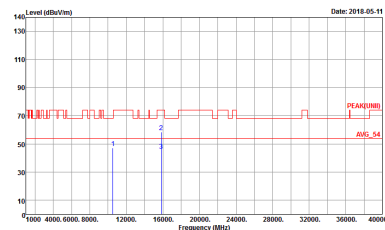
| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                                    |                                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH60 5300MHz                                                                                                            |                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                           | Vertical                                                                                                                           |
| Peak<br>Avg. | <div><p>Level (dBm/1m)</p><p>Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL</p></div> | <div><p>Level (dBm/1m)</p><p>Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 VERTICAL</p></div> |



| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                                    |                                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH64 5320MHz                                                                                                            |                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                           | Vertical                                                                                                                           |
| Peak<br>Avg. | <div><p>Level (dBm/1m)</p><p>Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL</p></div> | <div><p>Level (dBm/1m)</p><p>Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 VERTICAL</p></div> |



Band 2 5250~5350MHz  
WIFI 802.11n HT40 (Harmonic @ 3m)

| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                                                                   |                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH54 5270                                                                                                                                              |                                                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                                                          | Vertical                                                                                                                                                           |
| Peak<br>Avg. |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |

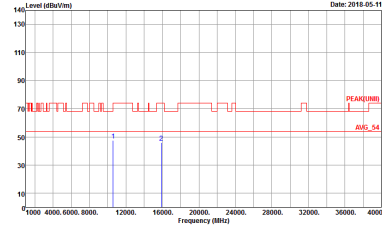
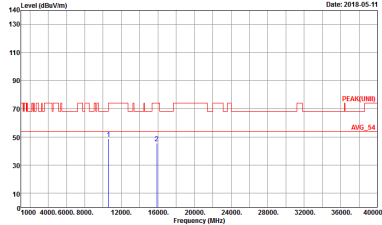




| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                              |                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH62 5310                                                                                                         |                                                                                                                              |
| 1+2          | Horizontal                                                                                                                     | Vertical                                                                                                                     |
| Peak<br>Avg. | <div><p>Level (dBm/1m) Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL</p></div> | <div><p>Level (dBm/1m) Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 VERTICAL</p></div> |

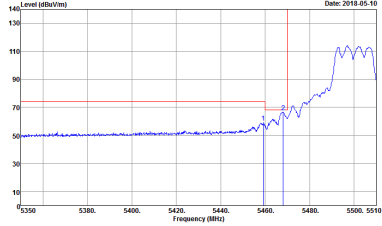
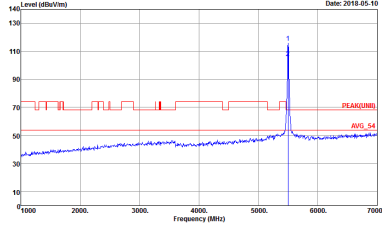
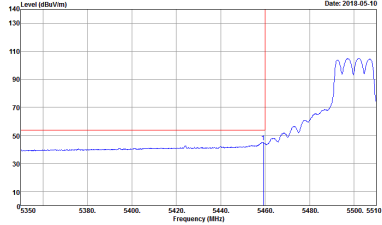


Band 2 5250~5350MHz  
WIFI 802.11ac VHT80 (Harmonic @ 3m)

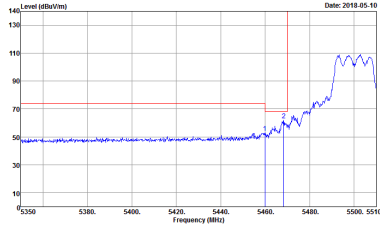
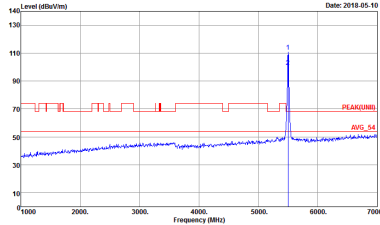
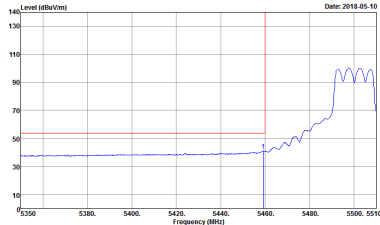
| WIFI         | Band 2 5250~5350MHz Harmonic @ 3m                                                                                                                                   |                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11ac VHT80 CH58 5290MHz                                                                                                                                         |                                                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                                                          | Vertical                                                                                                                                                           |
| Peak<br>Avg. |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |



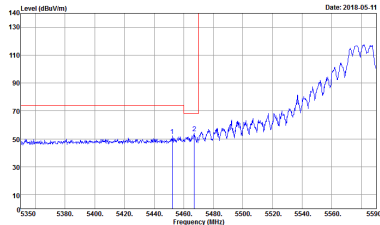
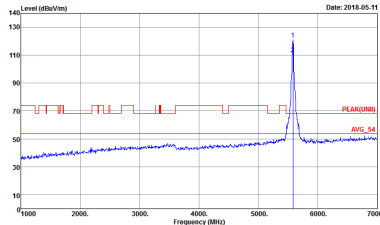
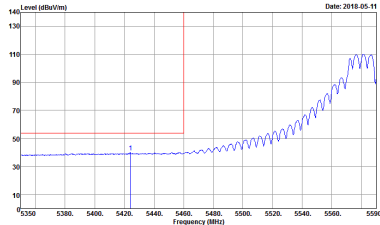
**Band 3 - 5470~5725MHz**  
**WIFI 802.11a (Band Edge @ 3m)**

| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                      |                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH100 5500MHz                                                                                                                                                                                                   |                                                                                                                                                                                                                    |
| 1+2  | Horizontal                                                                                                                                                                                                              | Fundamental                                                                                                                                                                                                        |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                         |

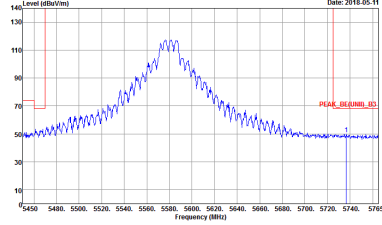


| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                               |                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH100 5500MHz                                                                                                                                                                                                            |                                                                                                                                                                                                                             |
| 1+2  | Vertical                                                                                                                                                                                                                         | Fundamental                                                                                                                                                                                                                 |
| Peak | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> |
| Avg. | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:1000KHz SWT:Auto</p></div>    | Left blank                                                                                                                                                                                                                  |

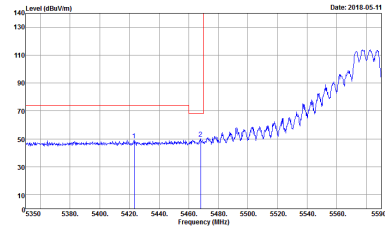
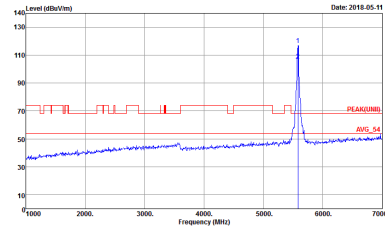
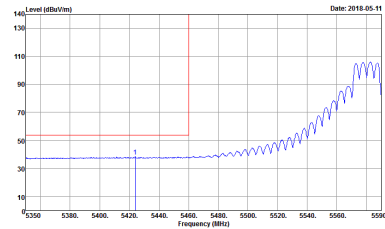


| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                |                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH116 5580MHz - L                                                                                                                                                                                                         |                                                                                                                                                                                                                              |
| 1+2  | Horizontal                                                                                                                                                                                                                        | Fundamental                                                                                                                                                                                                                  |
| Peak | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> |
| Avg. | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1000KHz SWT:Auto</p></div>    | Left blank                                                                                                                                                                                                                   |

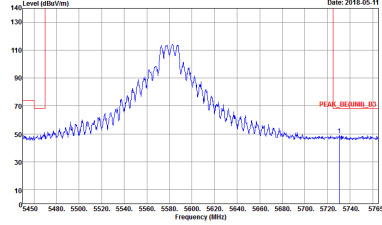


| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                                     |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11a CH116 5580MHz - R                                                                                                                                                                                                                              |             |
| 1+2  | Horizontal                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT]_B3 3m HORN_9120D_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p><p>Date: 2018.05.11</p></div> | Left blank  |



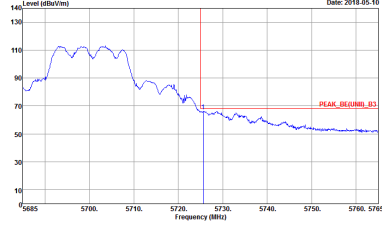
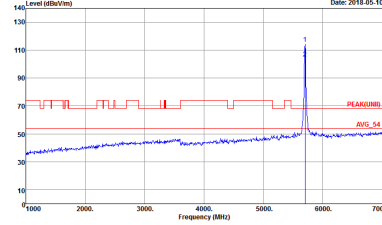
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                    |                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH116 5580MHz - L                                                                                                                                                                                             |                                                                                                                                                                                                                  |
| 1+2  | Vertical                                                                                                                                                                                                              | Fundamental                                                                                                                                                                                                      |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>    | Left blank                                                                                                                                                                                                       |



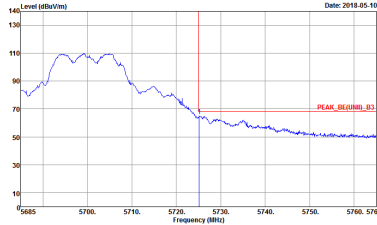
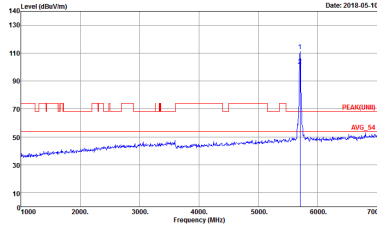
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                                   |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11a CH116 5580MHz - R                                                                                                                                                                                                                            |             |
| 1+2  | Vertical                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT]_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p><p>Date: 2018.05.11</p></div> | Left blank  |





| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                               |                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11a CH140 5700MHz                                                                                                                                                                                                            |                                                                                                                                                                                                                             |
| 1+2  | Horizontal                                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                                 |
| Peak | <div><p>Site : 03CH12-4NY<br/>Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> | <div><p>Site : 03CH12-4NY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> |



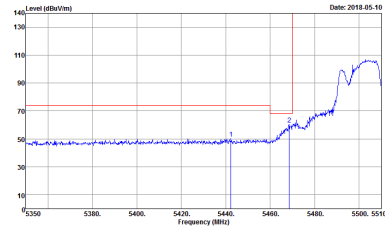
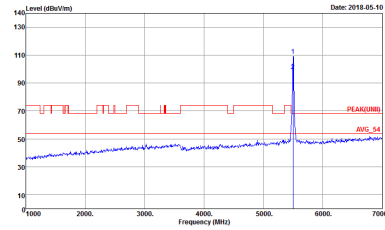
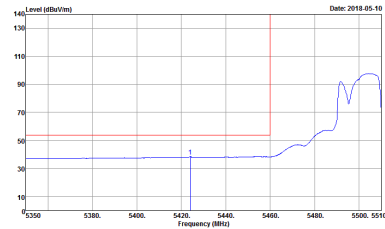
|      |                                                                                                                                                                                                                                  |                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                               |                                                                                                                                                                                                                             |
| ANT  | 802.11a CH140 5700MHz                                                                                                                                                                                                            |                                                                                                                                                                                                                             |
| 1+2  | Vertical                                                                                                                                                                                                                         | Fundamental                                                                                                                                                                                                                 |
| Peak | <div><p>Site : 03CH12-4NY<br/>Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> | <div><p>Site : 03CH12-4NY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> |



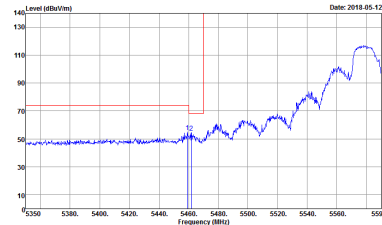
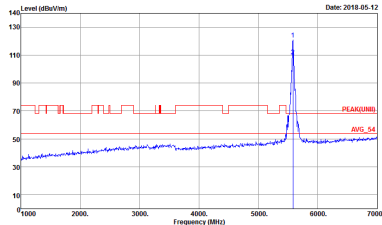
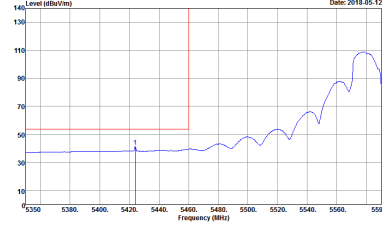
**Band 3 5470~5725MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                     |                                                                                                                                  |
|------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH100 5500MHz                                                                                                             |                                                                                                                                  |
| 1+2  | Horizontal                                                                                                                             | Fundamental                                                                                                                      |
| Peak | <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>     | Left blank                                                                                                                       |

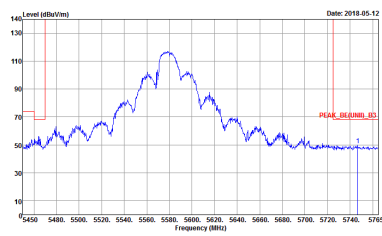


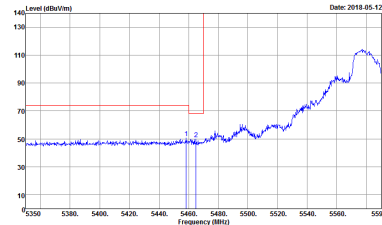
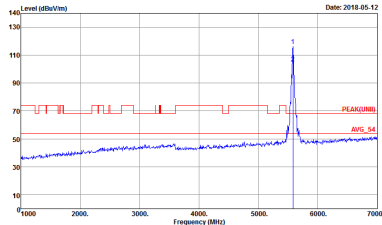
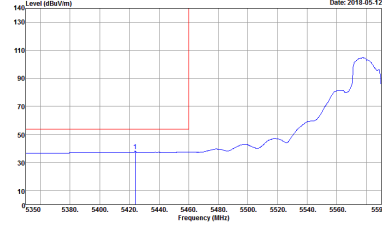
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                      |                                                                                                                                                                                                                   |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH100 5500MHz                                                                                                                                                                                              |                                                                                                                                                                                                                   |
| 1+2  | Vertical                                                                                                                                                                                                                | Fundamental                                                                                                                                                                                                       |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                        |



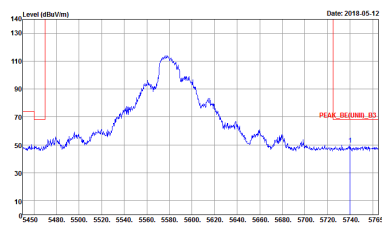
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                       |                                                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH116 5580MHz - L                                                                                                                                                                                           |                                                                                                                                                                                                                    |
| 1+2  | Horizontal                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                        |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                         |



| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                                      |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT20 CH116 5580MHz - R                                                                                                                                                                                                                          |             |
| 1+2  | Horizontal                                                                                                                                                                                                                                              | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT], B3 3m HORN_9120D_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p><p>Date: 2018.05.12</p></div> | Left blank  |

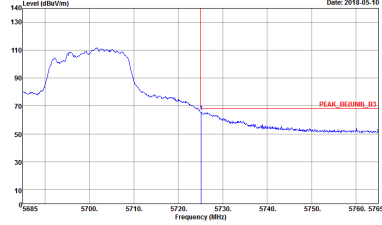
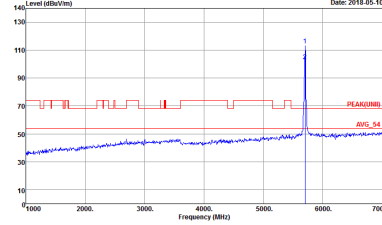
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                    |                                                                                                                                                                                                                 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT20 CH116 5580MHz - L                                                                                                                                                                                        |                                                                                                                                                                                                                 |
| 1+2  | Vertical                                                                                                                                                                                                              | Fundamental                                                                                                                                                                                                     |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank                                                                                                                                                                                                      |



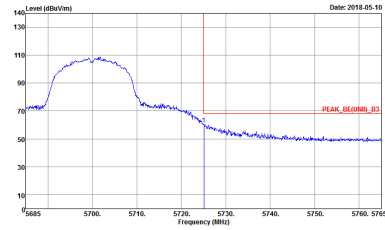
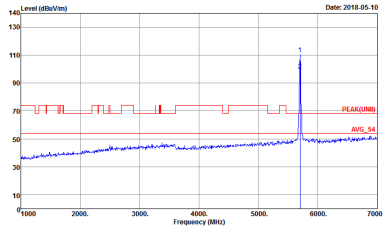
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                                    |             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT20 CH116 5580MHz - R                                                                                                                                                                                                                        |             |
| 1+2  | Vertical                                                                                                                                                                                                                                              | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT], B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p><p>Date: 2018.05.12</p></div> | Left blank  |





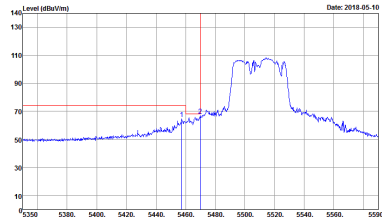
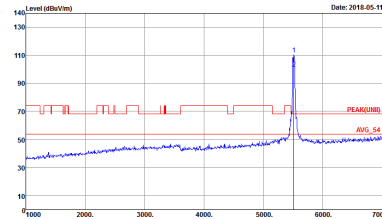
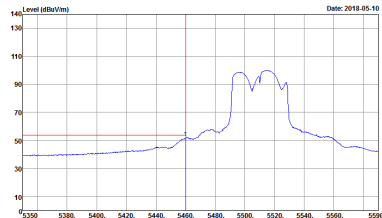
|      |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                     |                                                                                                                                                                                                                                   |
| ANT  | 802.11n HT20 CH140 5700MHz                                                                                                                                                                                                             |                                                                                                                                                                                                                                   |
| 1+2  | Horizontal                                                                                                                                                                                                                             | Fundamental                                                                                                                                                                                                                       |
| Peak | <div><p>Site<br/>Condition : 03CH12-4HY<br/>: PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> | <div><p>Site<br/>Condition : 03CH12-4HY<br/>: PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> |



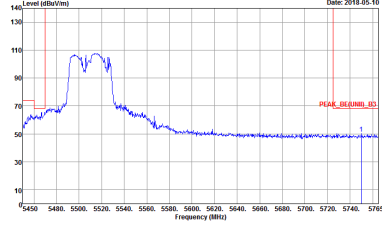
|       |                                                                                                                                                                                                                              |                                                                                                                                                                                                                            |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WIFI  | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                           |                                                                                                                                                                                                                            |
| ANT   | 802.11n HT20 CH140 5700MHz                                                                                                                                                                                                   |                                                                                                                                                                                                                            |
| 1+2   | Vertical                                                                                                                                                                                                                     | Fundamental                                                                                                                                                                                                                |
| Peak. | <div><p>Site: 03CH12-4NY<br/>Condition: PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> | <div><p>Site: 03CH12-4NY<br/>Condition: PEAK(UNIT)_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> |



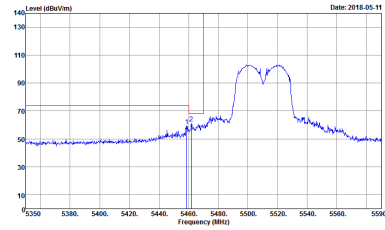
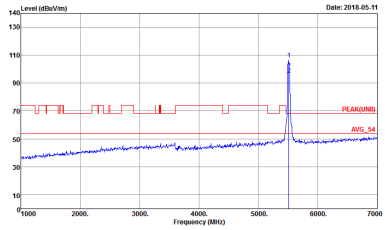
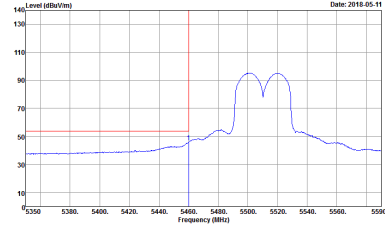
**Band 3 5470~5725MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                       |                                                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH102 5510MHz - L                                                                                                                                                                                           |                                                                                                                                                                                                                     |
| 1+2  | Horizontal                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                         |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                          |

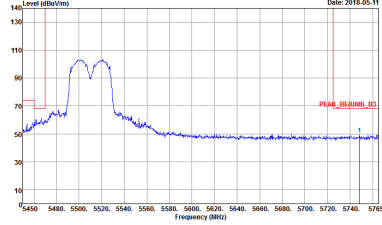


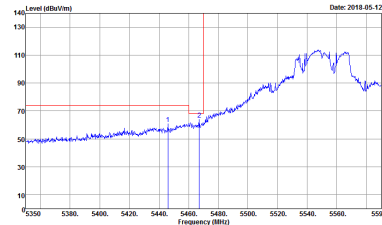
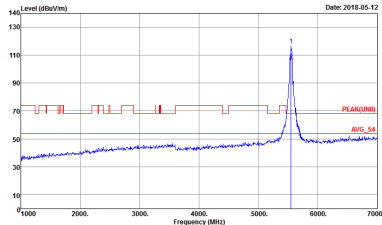
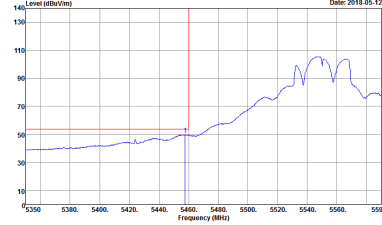
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                                      |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH102 5510MHz - R                                                                                                                                                                                                                          |             |
| 1+2  | Horizontal                                                                                                                                                                                                                                              | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT], B3 3m HORN_9120D_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p><p>Date: 2018.05.10</p></div> | Left blank  |



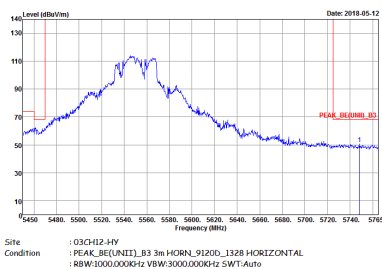
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                     |                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH102 5510MHz - L                                                                                                                                                                                         |                                                                                                                                                                                                                   |
| 1+2  | Vertical                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                       |
| Peak |  <p>Site: 03CH12-HY<br/>Condition: : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site: 03CH12-HY<br/>Condition: : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site: 03CH12-HY<br/>Condition: : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>    | Left blank                                                                                                                                                                                                        |



| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                                   |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH102 5510MHz - R                                                                                                                                                                                                                       |             |
| 1+2  | Vertical                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT]_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p><p>Date: 2018.05.11</p></div> | Left blank  |

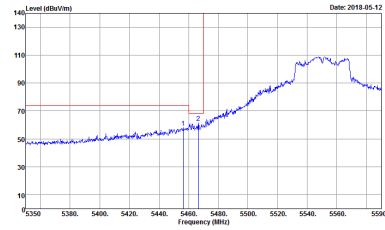
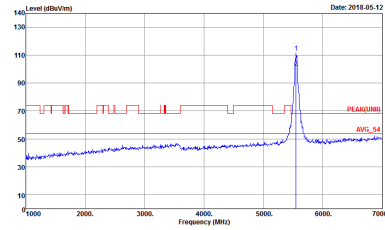
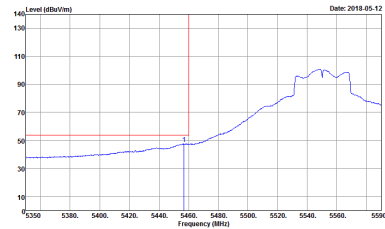
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                       |                                                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH110 5550MHz - L                                                                                                                                                                                           |                                                                                                                                                                                                                     |
| 1+2  | Horizontal                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                         |
| Peak |  <p>Site: 03CH12-HY<br/>Condition: : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site: 03CH12-HY<br/>Condition: : PEAK(UNIT1) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site: 03CH12-HY<br/>Condition: : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>    | Left blank                                                                                                                                                                                                          |



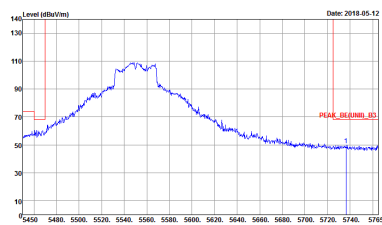
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                           |             |
|------|----------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH110 5550MHz - R                                                               |             |
| 1+2  | Horizontal                                                                                   | Fundamental |
| Peak | <div></div> | Left blank  |



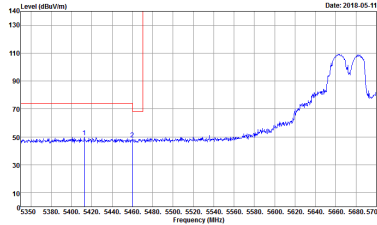
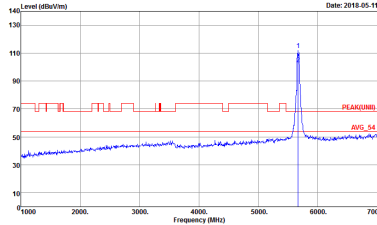
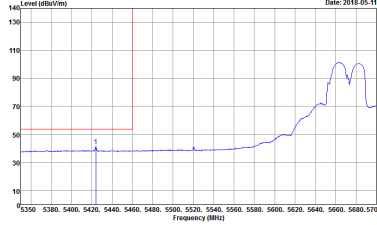


| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                     |                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH110 5550MHz - L                                                                                                                                                                                         |                                                                                                                                                                                                                   |
| 1+2  | Vertical                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                       |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>    | Left blank                                                                                                                                                                                                        |

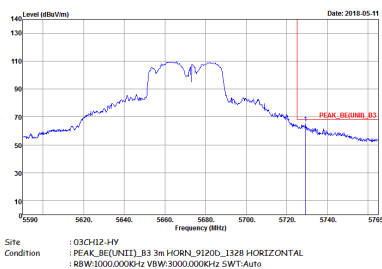


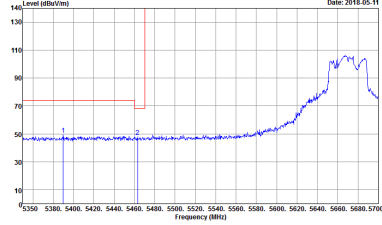
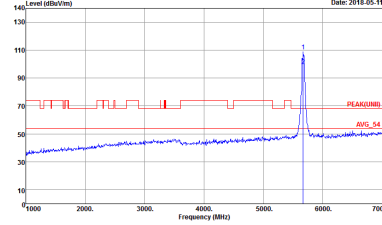
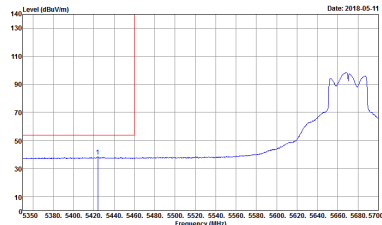
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                                   |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH110 5550MHz - R                                                                                                                                                                                                                       |             |
| 1+2  | Vertical                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT]_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p><p>Date: 2018.05.12</p></div> | Left blank  |



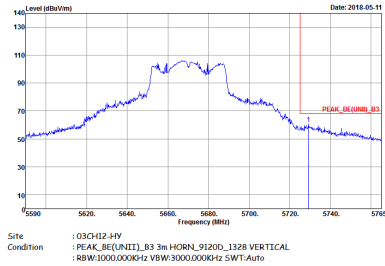
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                      |                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH134 5670MHz - L                                                                                                                                                                                          |                                                                                                                                                                                                                    |
| 1+2  | Horizontal                                                                                                                                                                                                              | Fundamental                                                                                                                                                                                                        |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                         |



| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                           |             |
|------|----------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH134 5670MHz - R                                                               |             |
| 1+2  | Horizontal                                                                                   | Fundamental |
| Peak | <div></div> | Left blank  |

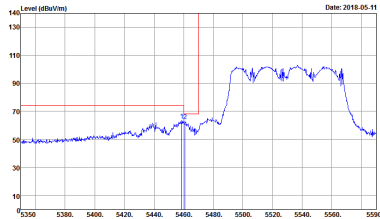
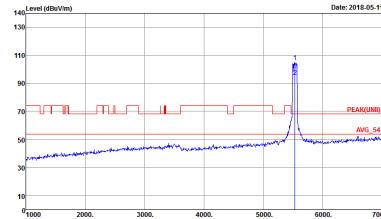
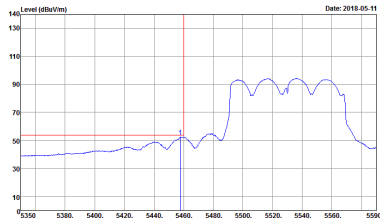
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                   |                                                                                                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11n HT40 CH134 5670MHz - L                                                                                                                                                                                       |                                                                                                                                                                                                                 |
| 1+2  | Vertical                                                                                                                                                                                                             | Fundamental                                                                                                                                                                                                     |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                      |



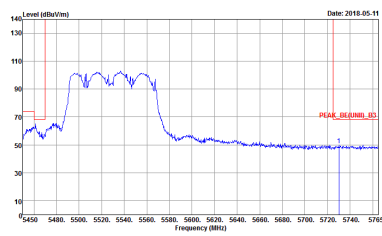
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                           |             |
|------|----------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11n HT40 CH134 5670MHz - R                                                               |             |
| 1+2  | Vertical                                                                                     | Fundamental |
| Peak | <div></div> | Left blank  |



**Band 3 5470~5725MHz**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

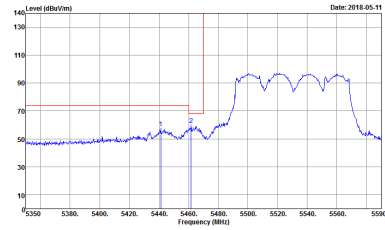
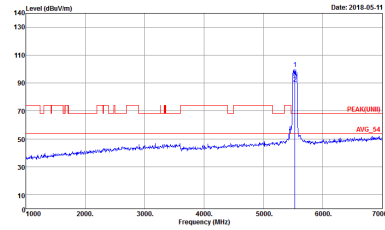
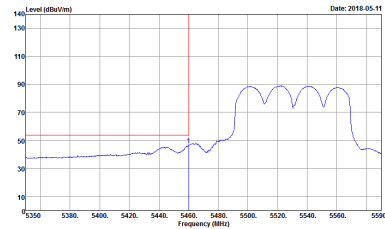
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                       |                                                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ac VHT80 CH106 5530MHz - L                                                                                                                                                                                         |                                                                                                                                                                                                                     |
| 1+2  | Horizontal                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                         |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                          |



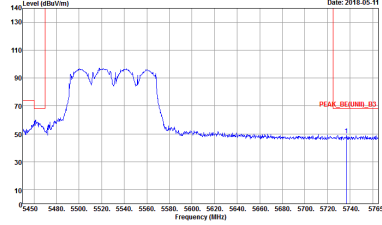
| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                |             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11ac VHT80 CH106 5530MHz - R                                                                                                                                                                                                  |             |
| 1+2  | Horizontal                                                                                                                                                                                                                        | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT],B3 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p></div> | Left blank  |



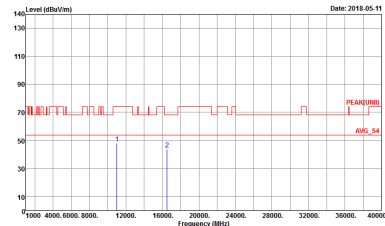
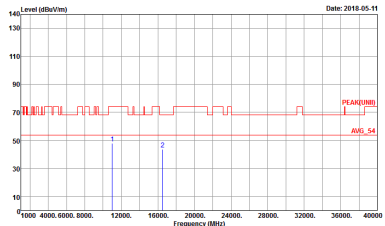


| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                     |                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ac VHT80 CH106 5530MHz - L                                                                                                                                                                                       |                                                                                                                                                                                                                   |
| 1+2  | Vertical                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                       |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE(UNIT1)_B3 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                        |



| WIFI | Band 3 5470~5725MHz Band Edge @ 3m                                                                                                                                                                                                                   |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11ac VHT80 CH106 5530MHz - R                                                                                                                                                                                                                     |             |
| 1+2  | Vertical                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH2-47Y<br/>Condition : PEAK_BE[UNIT]_B3 3m HORN_9120D_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p><p>Date: 2018.05.11</p></div> | Left blank  |

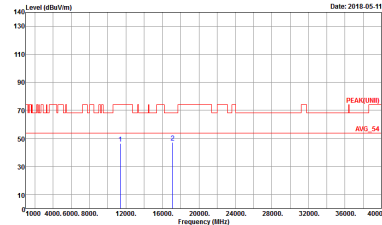
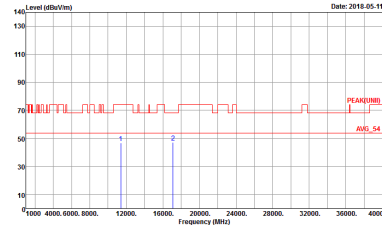
**Band 3 - 5470~5725MHz**
**WIFI 802.11a (Harmonic @ 3m)**

| WIFI                           | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                  |                                                                                                                                                                   |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT                            | 802.11a CH100 5500MHz                                                                                                                                              |                                                                                                                                                                   |
| 1+2                            | Horizontal                                                                                                                                                         | Vertical                                                                                                                                                          |
| <b>Peak</b><br><br><b>Avg.</b> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |

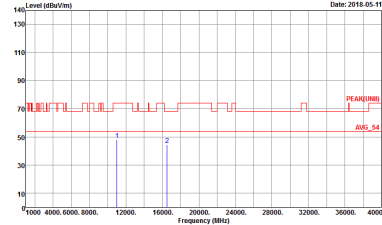
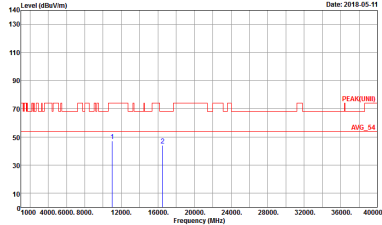


| WIFI         | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                               |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH116 5580MHz                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                               |
| 1+2          | Horizontal                                                                                                                                                                                                                                                                                                                                      | Vertical                                                                                                                                                                                                                                                                                                                                      |
| Peak<br>Avg. | <div><p>Level (dBm/100MHz)</p><p>140<br/>130<br/>120<br/>110<br/>100<br/>90<br/>80<br/>70<br/>60<br/>50<br/>40<br/>30<br/>20<br/>10</p><p>1000 4000 8000 12000 16000 20000 24000 28000 32000 36000 40000</p><p>Frequency (MHz)</p><p>Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL</p></div> | <div><p>Level (dBm/100MHz)</p><p>140<br/>130<br/>120<br/>110<br/>100<br/>90<br/>80<br/>70<br/>60<br/>50<br/>40<br/>30<br/>20<br/>10</p><p>1000 4000 8000 12000 16000 20000 24000 28000 32000 36000 40000</p><p>Frequency (MHz)</p><p>Date: 2018-05-11</p><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL</p></div> |

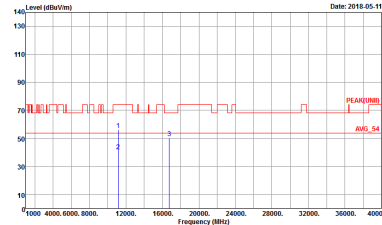
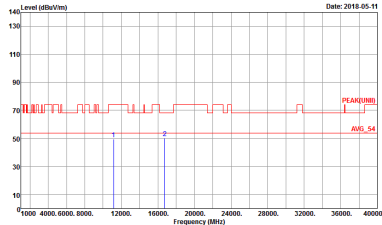


| WIFI         | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                  |                                                                                                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH140 5700MHz                                                                                                                                              |                                                                                                                                                                   |
| 1+2          | Horizontal                                                                                                                                                         | Vertical                                                                                                                                                          |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL</p> |

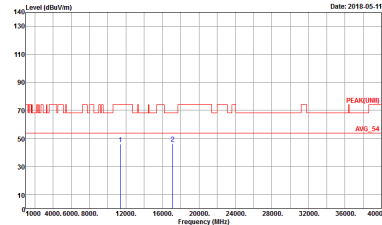
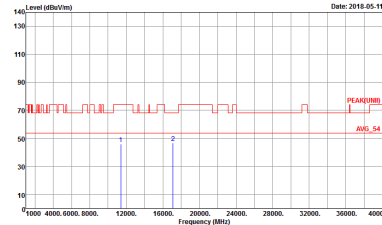
**Band 3 5470~5725MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI                           | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                    |                                                                                                                                                                     |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT                            | 802.11n HT20 CH100 5500MHz                                                                                                                                           |                                                                                                                                                                     |
| 1+2                            | Horizontal                                                                                                                                                           | Vertical                                                                                                                                                            |
| <b>Peak</b><br><br><b>Avg.</b> |  <p>Site : 03CH12-1HY<br/> Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-1HY<br/> Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |



| WIFI         | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                  |                                                                                                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH116 5580MHz                                                                                                                                         |                                                                                                                                                                   |
| 1+2          | Horizontal                                                                                                                                                         | Vertical                                                                                                                                                          |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL</p> |

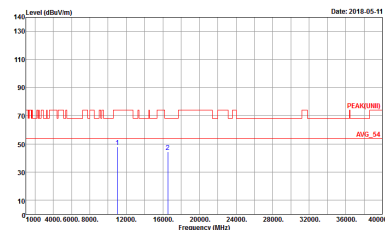


| WIFI         | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                   |                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH140 5700MHz                                                                                                                                          |                                                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                                                          | Vertical                                                                                                                                                           |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : :PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL</p> |  <p>Site : 03CH12-HY<br/>Condition : :PEAK(UNIT) 3m HORN_91200_1328 VERTICAL</p> |

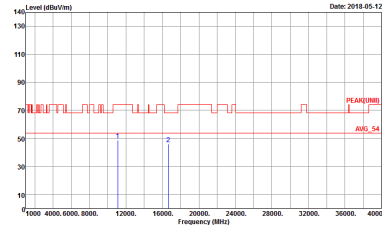
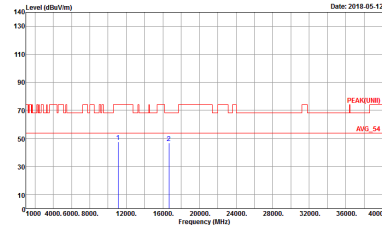




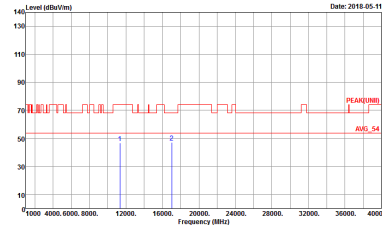
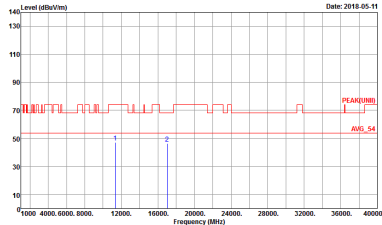
Band 3 5470~5725MHz  
WIFI 802.11n HT40 (Harmonic @ 3m)

| WIFI         | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                   |                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH102 5510MHz                                                                                                                                          |                                                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                                                          | Vertical                                                                                                                                                           |
| Peak<br>Avg. |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |



| WIFI         | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                  |                                                                                                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH110 5550MHz                                                                                                                                         |                                                                                                                                                                   |
| 1+2          | Horizontal                                                                                                                                                         | Vertical                                                                                                                                                          |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL</p> |

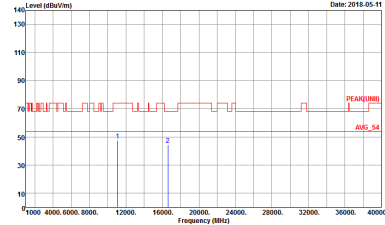
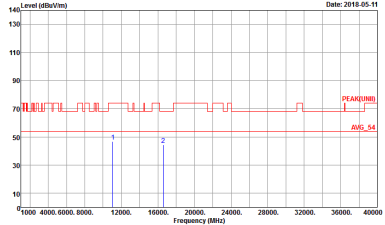


| WIFI         | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                  |                                                                                                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH134 5670MHz                                                                                                                                         |                                                                                                                                                                   |
| 1+2          | Horizontal                                                                                                                                                         | Vertical                                                                                                                                                          |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK[UNIT] 3m HORN_91200_1328 HORIZONTAL</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK[UNIT] 3m HORN_91200_1328 VERTICAL</p> |



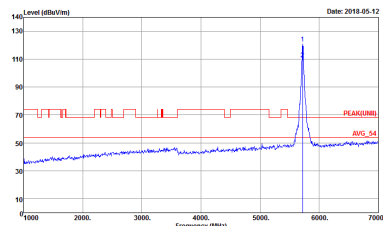
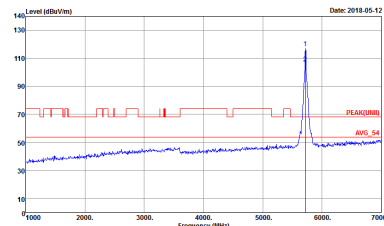
Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

| WIFI         | Band 3 5470~5725MHz Harmonic @ 3m                                                                                                                                   |                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11ac VHT80 CH106 5530MHz                                                                                                                                        |                                                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                                                          | Vertical                                                                                                                                                           |
| Peak<br>Avg. |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |

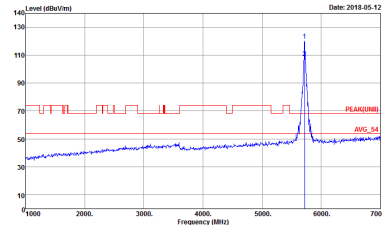
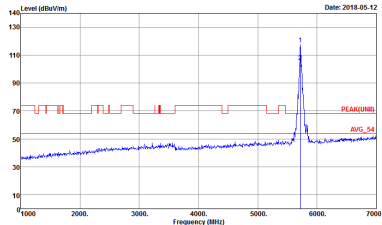


**Band 3 - Straddle Channel**  
**WIFI 802.11a (Fundamental @ 3m)**

| WIFI         | Band 3 Straddle Channel Fundamental @ 3m                                                                                                                                                                        |                                                                                                                                                                                                                |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH144 5720MHz - L                                                                                                                                                                                       |                                                                                                                                                                                                                |
| 1+2          | Horizontal                                                                                                                                                                                                      | Vertical                                                                                                                                                                                                       |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UM) 3m HORN_9120D_1328 HORIZONTAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UM) 3m HORN_9120D_1328 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |

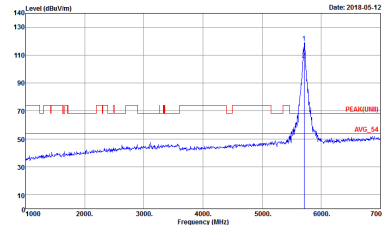
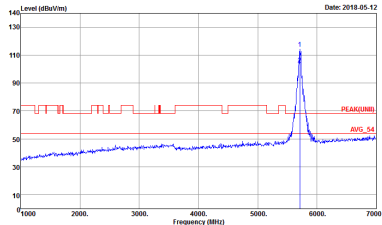


Band 3 – Straddle Channel  
WIFI 802.11n HT20 (Fundamental @ 3m)

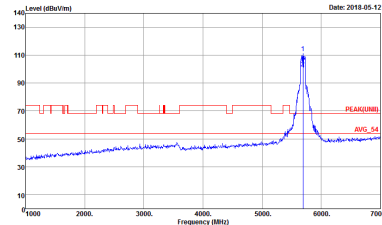
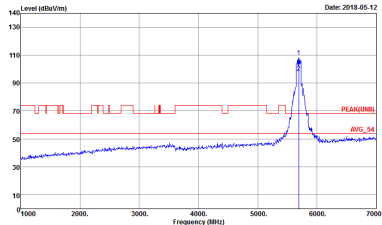
| WIFI         | Band 3 Straddle Channel Fundamental @ 3m                                                                                                                                                                        |                                                                                                                                                                                                                |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 CH144 5720MHz - L                                                                                                                                                                                  |                                                                                                                                                                                                                |
| 1+2          | Horizontal                                                                                                                                                                                                      | Vertical                                                                                                                                                                                                       |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |



Band 3 – Straddle Channel  
WIFI 802.11n HT40 (Fundamental @ 3m)

| WIFI         | Band 3 Straddle Channel Fundamental @ 3m                                                                                                                                                                        |                                                                                                                                                                                                                |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH142 5710MHz - L                                                                                                                                                                                  |                                                                                                                                                                                                                |
| 1+2          | Horizontal                                                                                                                                                                                                      | Vertical                                                                                                                                                                                                       |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |

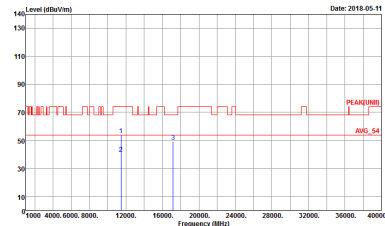
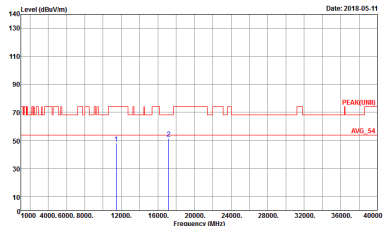
**Band 3 – Straddle Channel**  
**WIFI 802.11ac VHT80 (Fundamental @ 3m)**

| WIFI         | Band 3 Straddle Channel Fundamental @ 3m                                                                                                                                                                          |                                                                                                                                                                                                                  |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11ac VHT80 CH138 5690MHz - L                                                                                                                                                                                  |                                                                                                                                                                                                                  |
| 1+2          | Horizontal                                                                                                                                                                                                        | Vertical                                                                                                                                                                                                         |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/> Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/> RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH12-HY<br/> Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/> RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |

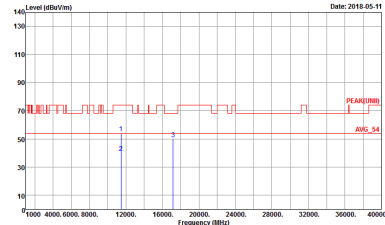
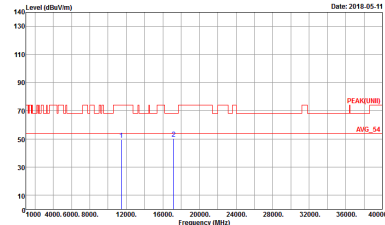




**Band 3 - Straddle Channel**  
**WIFI 802.11a (Harmonic @ 3m)**

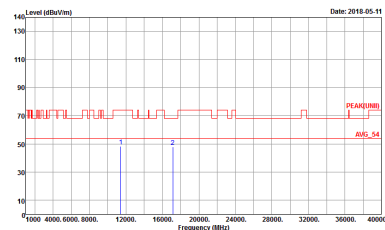
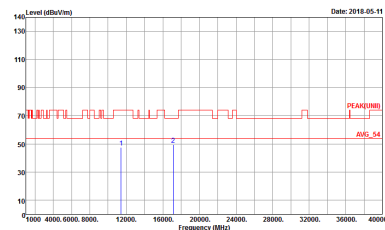
| WIFI         | Band 3 Straddle Channel Harmonic @ 3m                                                                                                                              |                                                                                                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11a CH144 5720MHz                                                                                                                                              |                                                                                                                                                                   |
| 1+2          | Horizontal                                                                                                                                                         | Vertical                                                                                                                                                          |
| Peak<br>Avg. |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |

**Band 3 – Straddle Channel**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI                           | Band 3 Straddle Channel Harmonic @ 3m                                                                                                                                |                                                                                                                                                                     |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT                            | 802.11n HT20 CH144 5720MHz                                                                                                                                           |                                                                                                                                                                     |
| 1+2                            | Horizontal                                                                                                                                                           | Vertical                                                                                                                                                            |
| <b>Peak</b><br><br><b>Avg.</b> |  <p>Site : 03CH12-14Y<br/> Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-14Y<br/> Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |

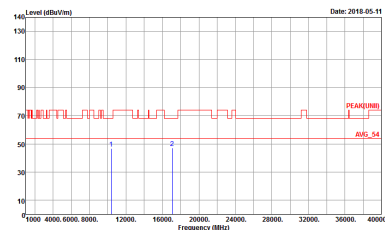
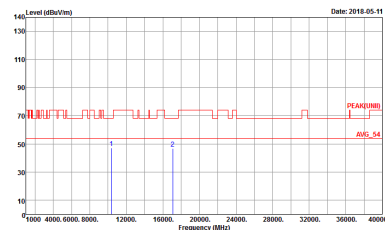


**Band 3 – Straddle Channel**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

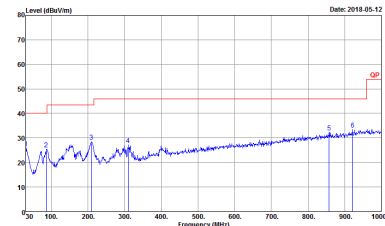
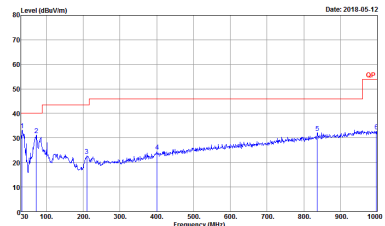
| WIFI         | Band 3 Straddle Channel Harmonic @ 3m                                                                                                                               |                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT40 CH142 5710MHz                                                                                                                                          |                                                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                                                          | Vertical                                                                                                                                                           |
| Peak<br>Avg. |  <p>Site : 03CH12-14Y<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL</p> |  <p>Site : 03CH12-14Y<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL</p> |



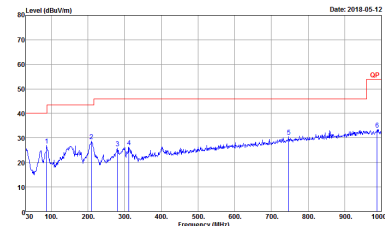
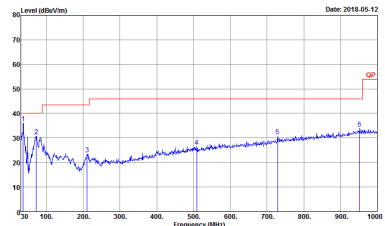
Band 3 – Straddle Channel  
WIFI 802.11ac VHT80 (Harmonic @ 3m)

| WIFI         | Band 3 Straddle Channel Harmonic @ 3m                                                                                                                               |                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11ac VHT80 CH138 5690MHz                                                                                                                                        |                                                                                                                                                                    |
| 1+2          | Horizontal                                                                                                                                                          | Vertical                                                                                                                                                           |
| Peak<br>Avg. |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL</p> |  <p>Site : 03CH12-1HY<br/>Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL</p> |

**Band 2 5250~5350MHz**
**Emission below 1GHz**
**5GHz WIFI 802.11n HT20 (LF)**

| WIFI         | 5GHz WIFI                                                                                                                                                       |                                                                                                                                                                |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT          | 802.11n HT20 LF                                                                                                                                                 |                                                                                                                                                                |
| 1+2          | Horizontal                                                                                                                                                      | Vertical                                                                                                                                                       |
| QP /<br>Peak |  <p>Site : 03CH12-14Y<br/>Condition : QP 3m BIL06_611D_47020M06 HORIZONTAL</p> |  <p>Site : 03CH12-14Y<br/>Condition : QP 3m BIL06_611D_47020M06 VERTICAL</p> |
|              |                                                                                                                                                                 |                                                                                                                                                                |

**Band 3 5470~5725MHz**  
**Emission below 1GHz**  
**5GHz WIFI 802.11n HT40 (LF)**

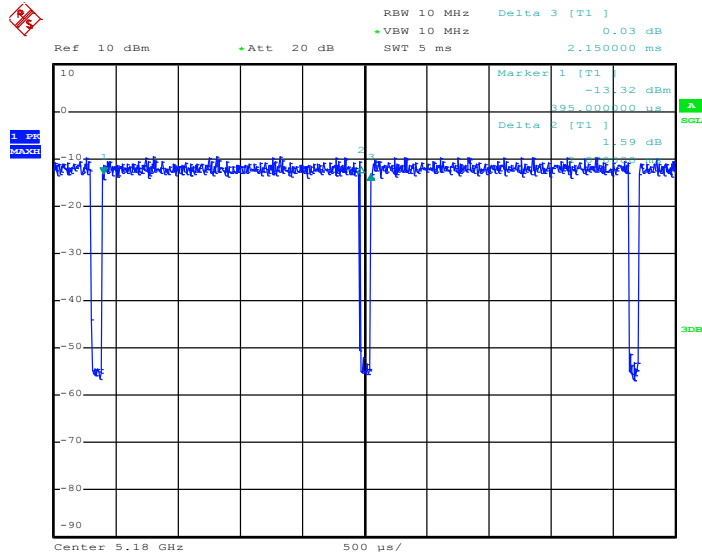
| WIFI                 | 5GHz WIFI                                                                                                                                                          |                                                                                                                                                                   |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT                  | 802.11n HT40 LF                                                                                                                                                    |                                                                                                                                                                   |
| 1+2                  | Horizontal                                                                                                                                                         | Vertical                                                                                                                                                          |
| <b>QP /<br/>Peak</b> |  <p> Site : 03CH12-14Y<br/> Condition : QP 3m BIL06_611D_47020M06 HORIZONTAL </p> |  <p> Site : 03CH12-14Y<br/> Condition : QP 3m BIL06_611D_47020M06 VERTICAL </p> |

## Appendix E. Duty Cycle Plots

| Antenna | Band                           | Duty Cycle (%) | T(us)   | 1/T(kHz) | VBW Setting | Duty Factor (dB) |
|---------|--------------------------------|----------------|---------|----------|-------------|------------------|
| 1+2     | 802.11a for Ant. 1             | 96.28          | 2070.00 | 0.48     | 1kHz        | 0.16             |
| 1+2     | 802.11a for Ant. 2             | 95.83          | 2070.00 | 0.48     | 1kHz        | 0.18             |
| 1+2     | 5GHz 802.11n HT20 for Ant. 1   | 97.65          | 4995.00 | 0.20     | 300Hz       | 0.10             |
| 1+2     | 5GHz 802.11n HT20 for Ant. 2   | 97.63          | 4950.00 | 0.20     | 300Hz       | 0.10             |
| 1+2     | 5GHz 802.11n HT40 for Ant. 1   | 96.03          | 2420.00 | 0.41     | 1kHz        | 0.18             |
| 1+2     | 5GHz 802.11n HT40 for Ant. 2   | 96.03          | 2420.00 | 0.41     | 1kHz        | 0.18             |
| 1+2     | 5GHz 802.11ac VHT80 for Ant. 1 | 92.74          | 1150.00 | 0.87     | 1kHz        | 0.33             |
| 1+2     | 5GHz 802.11ac VHT80 for Ant. 2 | 93.12          | 1150.00 | 0.87     | 1kHz        | 0.31             |

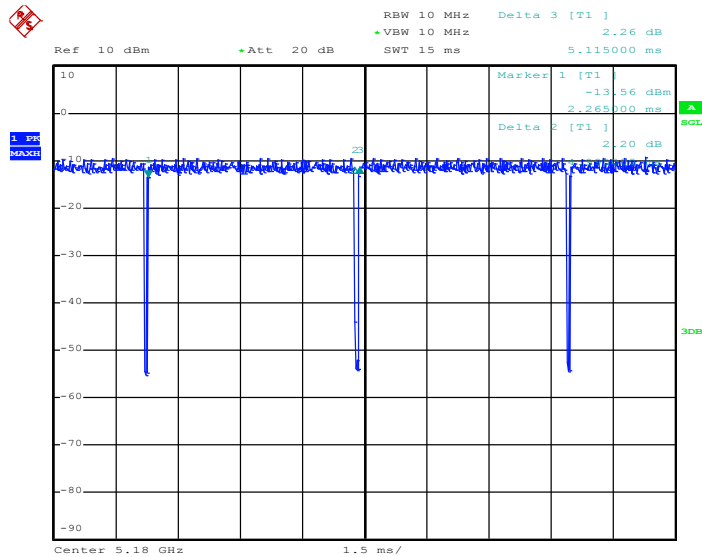
MIMO <Ant. 1>

802.11a



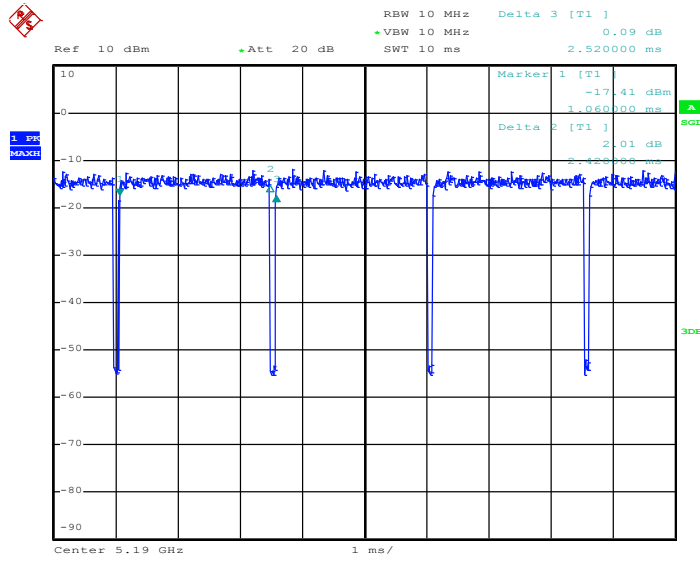
Date: 11.MAY.2018 10:51:54

802.11n HT20

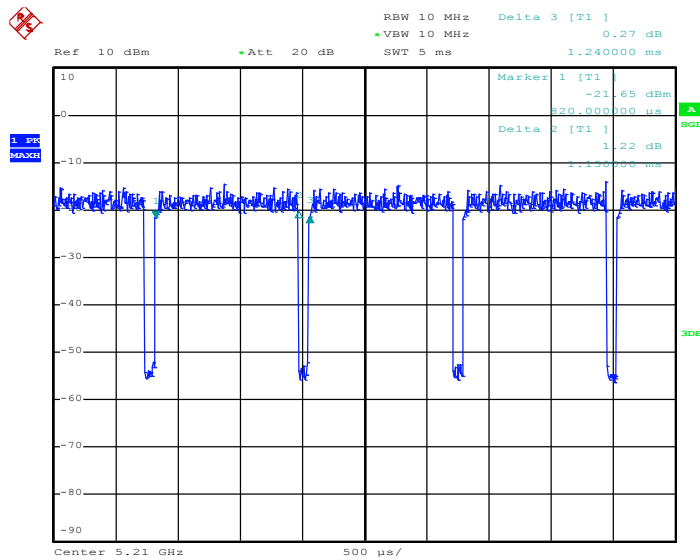


Date: 11.MAY.2018 10:53:42



**802.11n HT40**


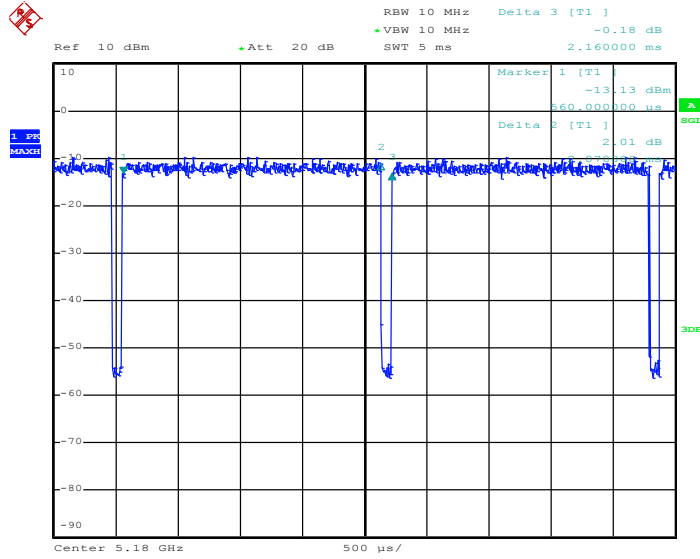
Date: 11.MAY.2018 10:55:32

**802.11ac VHT80**


Date: 11.MAY.2018 11:01:37

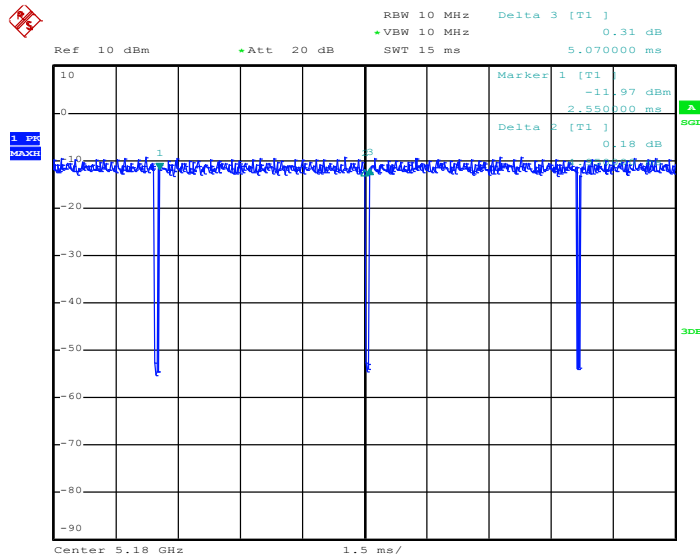
MIMO <Ant. 2>

802.11a



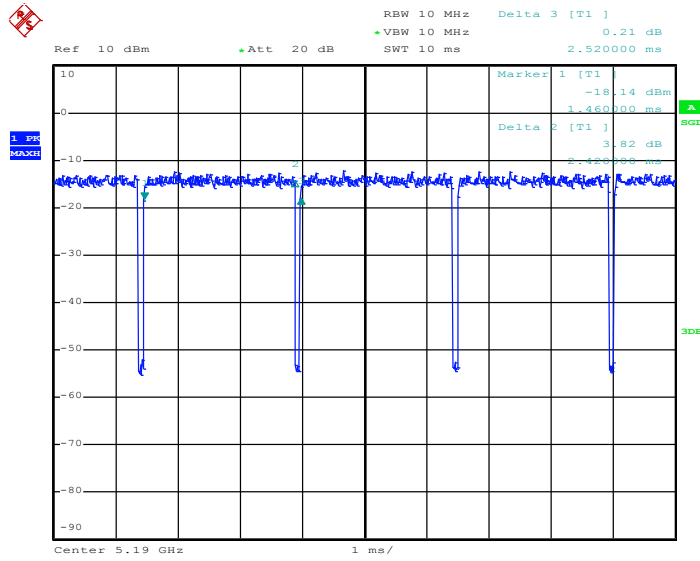
Date: 11.MAY.2018 10:52:21

802.11n HT20



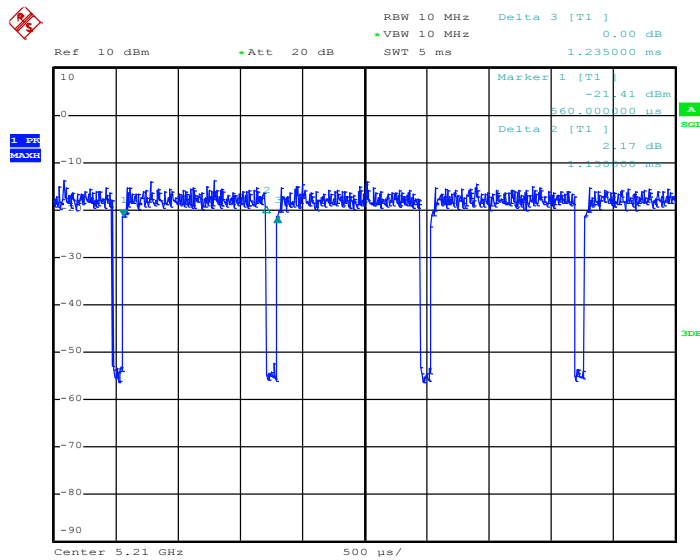
Date: 11.MAY.2018 10:54:24

## 802.11n HT40



Date: 11.MAY.2018 10:56:06

## 802.11ac VHT80



Date: 11.MAY.2018 11:02:11