



# FCC RADIO TEST REPORT

**FCC ID** : 2AIP8-SR00300W  
**Equipment** : Smartphone  
**Brand Name** : SIRIN LABS  
**Model Name** : SR00300-W  
**Applicant** : SIRIN LABS AG  
Freier Platz 10, 8200 Schaffhausen, Switzerland  
**Manufacturer** : SIRIN LABS AG  
Moserstrasse 48, 8200 Schaffhausen, Switzerland  
**Standard** : FCC Part 15 Subpart E §15.407

The product was received on Oct. 05, 2018 and testing was started from Oct. 19, 2018 and completed on Nov. 06, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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.

Approved by: Joseph Lin

**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



## 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 5.25 dB at 5353.200 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 11.82 dB at 0.152 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Pass	-
3.7	15.203 15.407(a)	Antenna Requirement	Pass	-

Reviewed by: Wii Chang

Report Producer: Maggie Chiang



## 1 General Description

### 1.1 Product Feature of Equipment Under Test

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

Product Specification subjective to this standard	
Antenna Type	WWAN: PIFA Antenna WLAN: <Ant. 1>: PIFA Antenna <Ant. 2>: PIFA Antenna Bluetooth: PIFA Antenna GPS/Glonass/BDS/Galileo: PIFA Antenna NFC: Loop Antenna

### 1.2 Modification of EUT

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

### 1.3 Testing Location

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

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

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

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

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



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



## 2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

### 2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		
Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		
Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	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 "#" were 802.11ac VHT80.

## 2.2 Test Mode

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

**Single Antenna (Covered by MIMO Antenna)**

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

**MIMO Mode**

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

**Test Cases**

AC Conducted Emission	Mode 1 : WCDMA Band V Idle + WLAN (5GHz) Link + Bluetooth Link + MPEG4 + USB Type C Cable (Charging from Adapter)
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Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

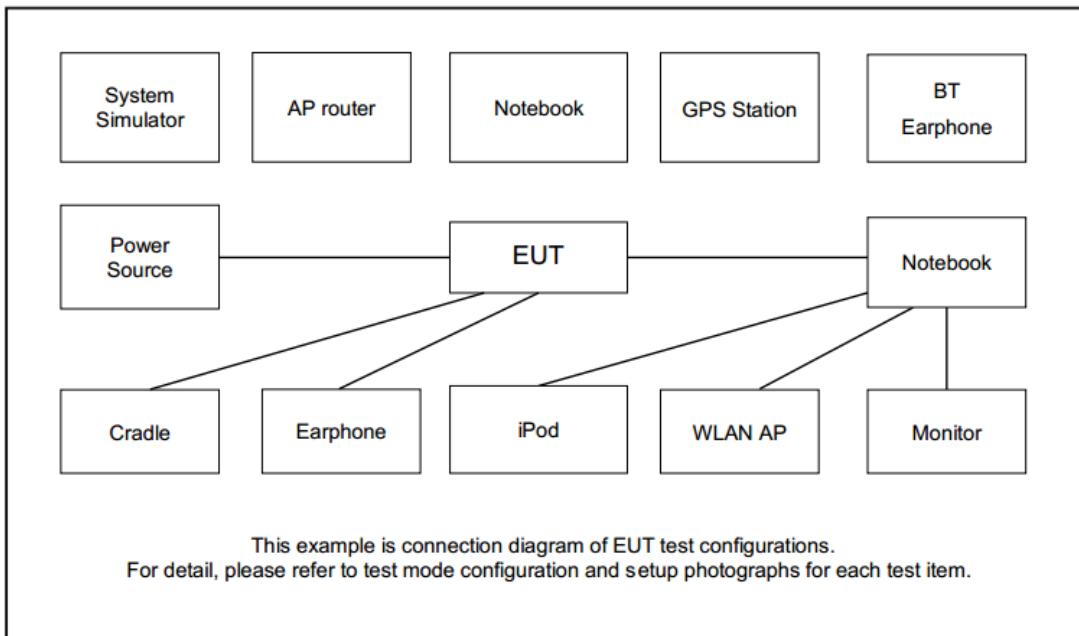
  

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	-
Straddle		-	-	138

## 2.3 Connection Diagram of Test System



## 2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8m
2.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8m
4.	Notebook	DELL	Latitude E3340	FCC DoC/ Contains FCC ID: PD97260NGU	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8m
5.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

## 2.5 EUT Operation Test Setup

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



## 2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

*Offset = RF cable loss + attenuator factor.*

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

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



### 3 Test Result

#### 3.1 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.

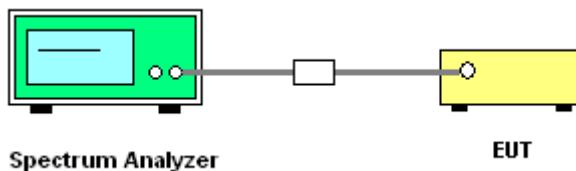
##### 3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

##### 3.1.3 Test Procedures

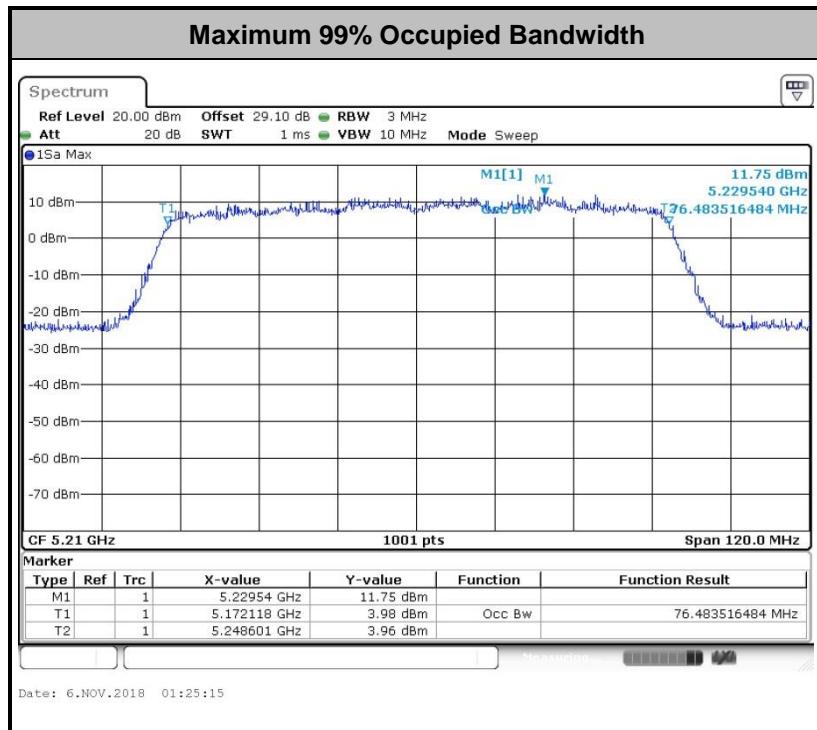
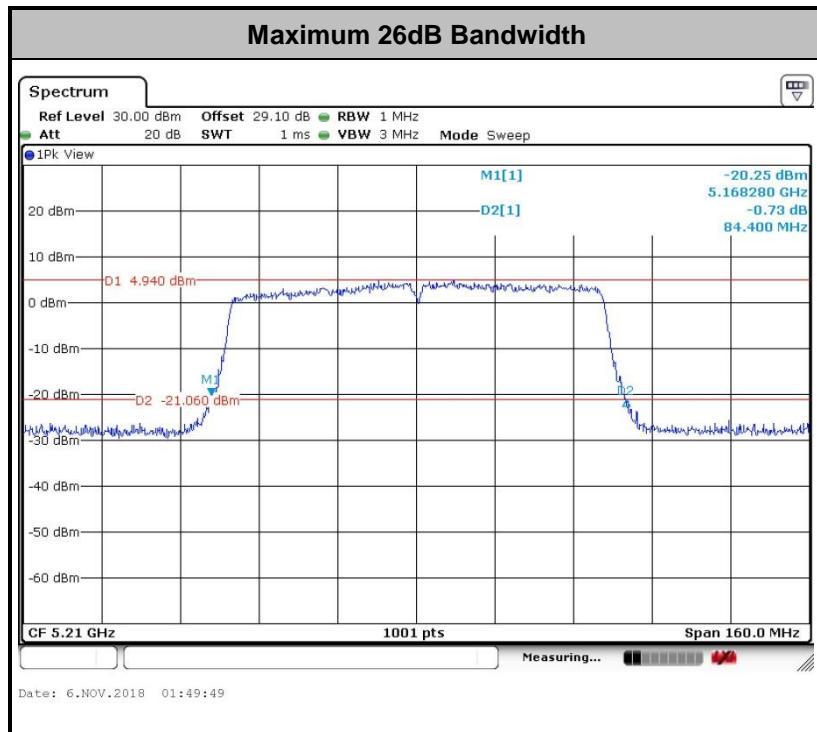
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB 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)  $\geq 3 * \text{RBW}$ .
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 5.15–5.25 GHz bands:

- For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

##### 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  $11 \text{ dBm} + 10 \log B$ , 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

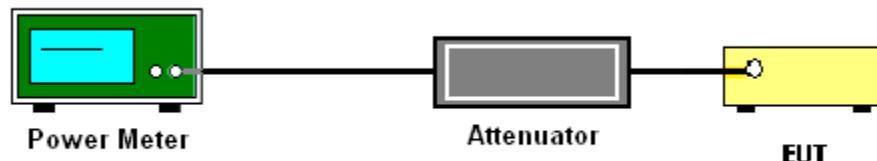
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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.

### 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 5.15–5.25 GHz bands:**

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1.0 MHz band.

##### **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.

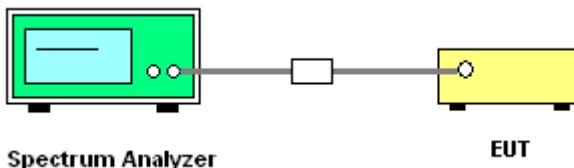


1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

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

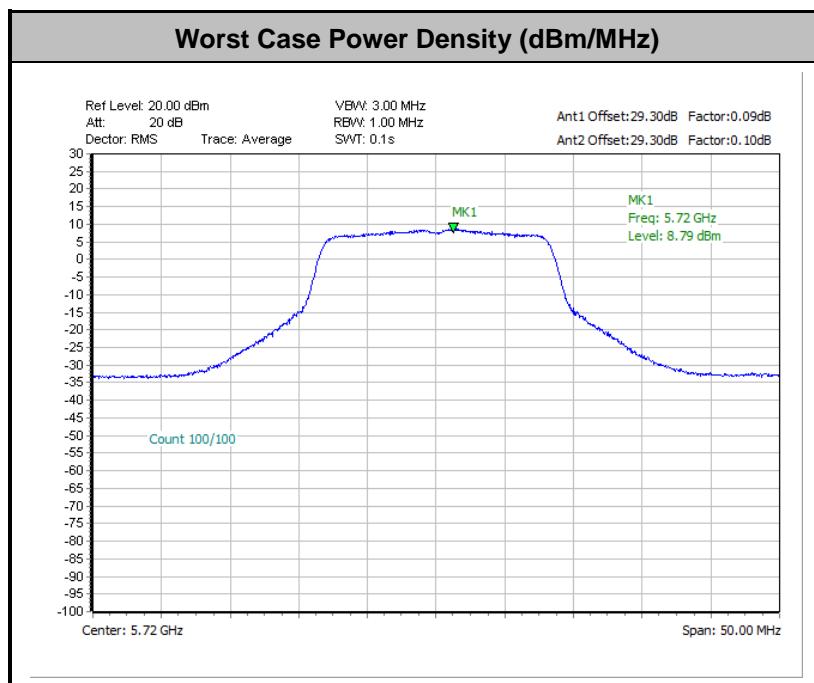
The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points; the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of 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 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27dBm/MHz.

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

For transmitters operating in the 5470-5600 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 (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

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

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



EIRP (dBm)	Field Strength at 3m (dB $\mu$ V/m)
- 27	68.3

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

- (i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.<sup>3</sup>
- (ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.<sup>4</sup>

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

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

### 3.4.2 Measuring Instruments

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

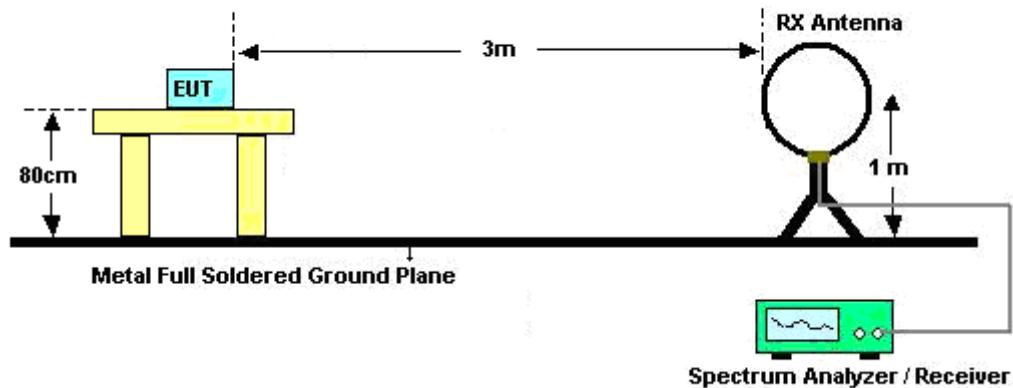


## (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

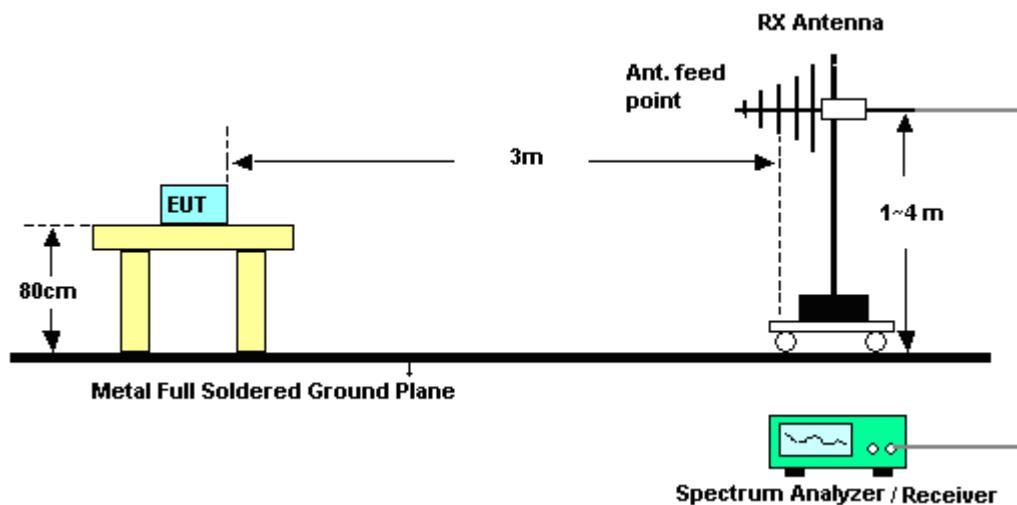
- RBW = 1 MHz
  - VBW = 10 Hz, when duty cycle is no less than 98 percent.
  - VBW  $\geq$  1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
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.

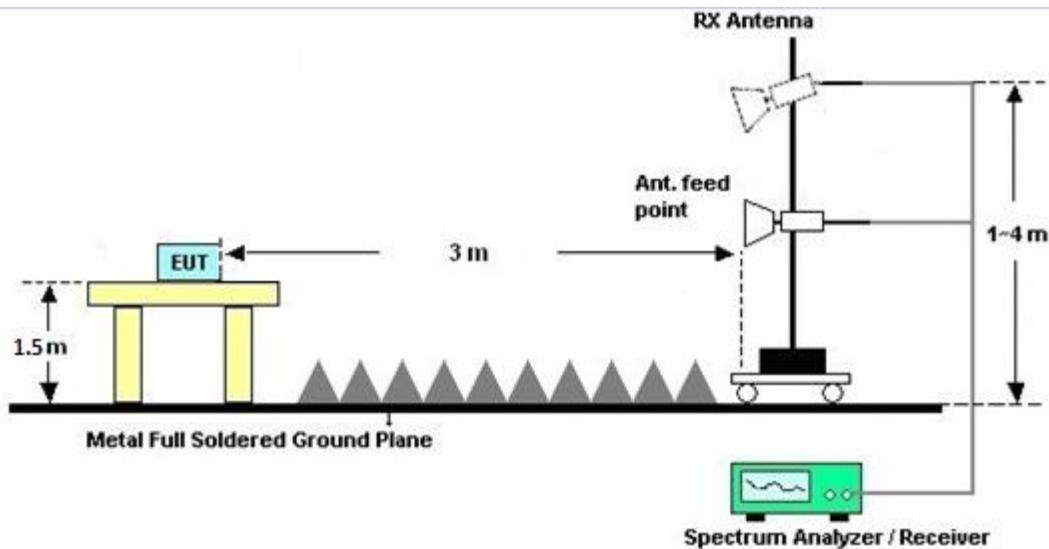
### 3.4.4 Test Setup

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.

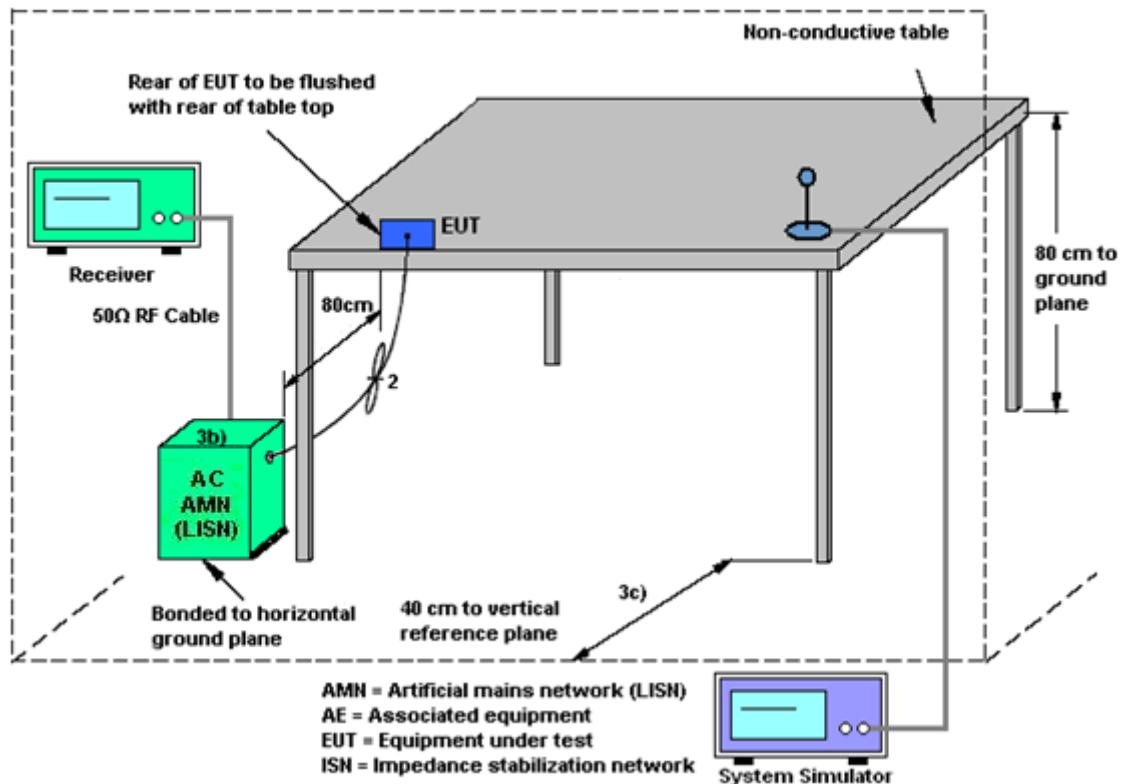
### 3.5.2 Measuring Instruments

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 =  $10 \log(NANT/NSS=1)$  dB.

For power measurements on IEEE 802.11 devices,

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

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.

<CDD Modes>						
	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit (dB)	PSD Limit (dB)
<b>Band I</b>	-5.10	-6.40	-5.10	-2.72	0.00	0.00
<b>Band II</b>	-4.60	-6.80	-4.60	-2.62	0.00	0.00
<b>Band III</b>	-3.70	-6.20	-3.70	-1.85	0.00	0.00

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

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



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	N/A	Aug. 16, 2018	Oct. 19, 2018~ Nov. 06, 2018	Aug. 15, 2019	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 16, 2018	Oct. 19, 2018~ Nov. 06, 2018	Aug. 15, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2017	Oct. 19, 2018~ Nov. 06, 2018	Nov. 20, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV 30	100895	9kHz~30GHz	Apr. 20, 2018	Oct. 19, 2018~ Nov. 06, 2018	Apr. 19, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	Oct. 19, 2018~ Nov. 06, 2018	Feb. 28, 2019	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Oct. 29, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Dec. 08, 2017	Oct. 29, 2018	Dec. 07, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Oct. 29, 2018	Nov. 29, 2018	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Oct. 29, 2018	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 03, 2018	Oct. 29, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 03, 2018	Oct. 29, 2018	Jan. 02, 2019	Conduction (CO05-HY)



## FCC RADIO TEST REPORT

Report No. : FR800518E

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 23, 2017	Oct. 23, 2018~Oct. 26, 2018	Nov. 22, 2018	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	171000180005 50006	1GHz~18GHz	Jul. 10, 2018	Oct. 23, 2018~Oct. 26, 2018	Jul. 09, 2019	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 26, 2017	Oct. 23, 2018~Oct. 26, 2018	Dec. 25, 2018	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&0080 0N1D01N-06	41912&05	30MHz to 1GHz	Jan. 10, 2018	Oct. 23, 2018~Oct. 26, 2018	Jan. 09, 2019	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY54130085	20Hz ~ 8.4GHz	Oct. 31, 2017	Oct. 23, 2018~Oct. 26, 2018	Oct. 30, 2018	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1620	1G~18GHz	Oct. 17, 2018	Oct. 23, 2018~Oct. 26, 2018	Oct. 16, 2019	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 23, 2018	Oct. 23, 2018~Oct. 26, 2018	Aug. 22, 2019	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	Apr. 25, 2018	Oct. 23, 2018~Oct. 26, 2018	Apr. 24, 2019	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Oct. 23, 2018~Oct. 26, 2018	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Oct. 23, 2018~Oct. 26, 2018	N/A	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz~40GHz	Nov. 27, 2017	Oct. 23, 2018~Oct. 26, 2018	Nov. 26, 2018	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 05, 2017	Oct. 23, 2018~Oct. 26, 2018	Dec. 04, 2018	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24	RK-000451	N/A	N/A	Oct. 23, 2018~Oct. 26, 2018	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER / MTJ Cooperation	SUCOFLEX 104 / 000000-MT18A-100	MY36980/4, MY9838/4PE, D3210	30MHz~1GHz	Mar. 15, 2018	Oct. 23, 2018~Oct. 26, 2018	Mar. 14, 2019	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER / MTJ Cooperation	SUCOFLEX 104 / 000000-MT18A-100	MY36980/4, MY9838/4PE, D3210	1GHz~18GHz	Mar. 15, 2018	Oct. 23, 2018~Oct. 26, 2018	Mar. 14, 2019	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30M~40GHz	Mar. 14, 2018	Oct. 23, 2018~Oct. 26, 2018	Mar. 13, 2019	Radiation (03CH15-HY)



## 5 Uncertainty of Evaluation

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

<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_{C(y)}</math>)</b>	<b>2.2</b>
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_{C(y)}</math>)</b>	<b>5.2</b>
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_{C(y)}</math>)</b>	<b>5.5</b>
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### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_{C(y)}</math>)</b>	<b>5.2</b>
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## Appendix A. Test Result of Conducted Test Items

Test Engineer:	Luffy Lin/Derek Hsu	Temperature:	21~25	°C
Test Date:	2018/10/19~2018/11/06	Relative Humidity:	51~54	%

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

Band I													
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	36	5180	16.78	16.68	24.28	23.58	-		22.22		
11a	6Mbps	2	44	5220	16.83	16.73	24.43	24.13	-		22.24		
11a	6Mbps	2	48	5240	16.78	16.73	24.43	24.68	-		22.24		
HT20	MCS0	2	36	5180	17.88	17.93	25.97	25.08	-		22.52		
HT20	MCS0	2	44	5220	17.98	17.88	26.67	25.28	-		22.52		
HT20	MCS0	2	48	5240	17.88	17.88	25.97	25.48	-		22.52		
HT40	MCS0	2	38	5190	36.56	36.56	41.90	42.35	-		23.01		
HT40	MCS0	2	46	5230	36.66	36.56	42.35	42.35	-		23.01		
VHT80	MCS0	2	42	5210	76.48	76.36	84.24	84.40	-		23.01		

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

FCC Band I														
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	36	5180	0.10	0.10	15.66	15.77		24.00	24.00	-5.10	-6.40	
11a	6Mbps	1	44	5220	0.10	0.10	15.82	15.86		24.00	24.00	-5.10	-6.40	
11a	6Mbps	1	48	5240	0.10	0.10	15.91	15.79		24.00	24.00	-5.10	-6.40	
HT20	MCS0	1	36	5180	0.09	0.10	13.84	13.74		24.00	24.00	-5.10	-6.40	
HT20	MCS0	1	44	5220	0.09	0.10	13.78	13.70		24.00	24.00	-5.10	-6.40	
HT20	MCS0	1	48	5240	0.09	0.10	13.74	13.72		24.00	24.00	-5.10	-6.40	
HT40	MCS0	1	38	5190	0.18	0.21	13.91	13.69		24.00	24.00	-5.10	-6.40	
HT40	MCS0	1	46	5230	0.18	0.21	13.85	13.66		24.00	24.00	-5.10	-6.40	
VHT20	MCS0	1	36	5180	0.11	0.09	13.79	13.64		24.00	24.00	-5.10	-6.40	
VHT20	MCS0	1	44	5220	0.11	0.09	13.75	13.66		24.00	24.00	-5.10	-6.40	
VHT20	MCS0	1	48	5240	0.11	0.09	13.66	13.62		24.00	24.00	-5.10	-6.40	
VHT40	MCS0	1	38	5190	0.16	0.18	13.86	13.64		24.00	24.00	-5.10	-6.40	
VHT40	MCS0	1	46	5230	0.16	0.18	13.81	13.60		24.00	24.00	-5.10	-6.40	
VHT80	MCS0	1	42	5210	0.37	0.36	13.85	13.64		24.00	24.00	-5.10	-6.40	
11a	6Mbps	2	36	5180	0.09	0.10	16.13	15.40	18.79	24.00		-5.10		
11a	6Mbps	2	44	5220	0.09	0.10	16.14	15.58	18.88	24.00		-5.10		
11a	6Mbps	2	48	5240	0.09	0.10	16.19	15.62	18.93	24.00		-5.10		
HT20	MCS0	2	36	5180	0.11	0.10	14.41	13.50	16.99	24.00		-5.10		
HT20	MCS0	2	44	5220	0.11	0.10	14.36	13.48	16.96	24.00		-5.10		
HT20	MCS0	2	48	5240	0.11	0.10	14.35	13.55	16.98	24.00		-5.10		
HT40	MCS0	2	38	5190	0.18	0.18	14.33	13.58	16.98	24.00		-5.10		
HT40	MCS0	2	46	5230	0.18	0.18	14.30	13.57	16.96	24.00		-5.10		
VHT20	MCS0	2	36	5180	0.08	0.10	14.35	13.46	16.94	24.00		-5.10		
VHT20	MCS0	2	44	5220	0.08	0.10	14.28	13.42	16.88	24.00		-5.10		
VHT20	MCS0	2	48	5240	0.08	0.10	14.30	13.48	16.92	24.00		-5.10		
VHT40	MCS0	2	38	5190	0.20	0.18	14.32	13.56	16.97	24.00		-5.10		
VHT40	MCS0	2	46	5230	0.20	0.18	14.28	13.54	16.94	24.00		-5.10		
VHT80	MCS0	2	42	5210	0.37	0.36	14.25	13.42	16.87	24.00		-5.10		

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

FCC Band I													
Mod.	Data Rate	N <sub>TX</sub>	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		
11a	6Mbps	2	36	5180	0.09	0.10			8.21	11.00	-2.72		Pass
11a	6Mbps	2	44	5220	0.09	0.10			7.79	11.00	-2.72		Pass
11a	6Mbps	2	48	5240	0.09	0.10			7.82	11.00	-2.72		Pass
HT20	MCS0	2	36	5180	0.11	0.10			6.15	11.00	-2.72		Pass
HT20	MCS0	2	44	5220	0.11	0.10			5.97	11.00	-2.72		Pass
HT20	MCS0	2	48	5240	0.11	0.10			6.00	11.00	-2.72		Pass
HT40	MCS0	2	38	5190	0.18	0.18			3.05	11.00	-2.72		Pass
HT40	MCS0	2	46	5230	0.18	0.18			2.96	11.00	-2.72		Pass
VHT80	MCS0	2	42	5210	0.37	0.36			-0.26	11.00	-2.72		Pass

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

Band II														
Mod.	Data Rate	N <sub>TX</sub>	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		
11a	6Mbps	2	52	5260	16.78	16.68	24.38	24.38	23.22		29.22		23.98	
11a	6Mbps	2	60	5300	16.88	16.78	24.83	24.78	23.25		29.25		23.98	
11a	6Mbps	2	64	5320	16.78	16.68	24.83	24.43	23.22		29.22		23.98	
HT20	MCS0	2	52	5260	17.98	17.88	26.52	25.23	23.52		29.52		23.98	
HT20	MCS0	2	60	5300	17.88	17.88	25.77	25.67	23.52		29.52		23.98	
HT20	MCS0	2	64	5320	17.98	17.88	26.17	25.52	23.52		29.52		23.98	
HT40	MCS0	2	54	5270	36.46	36.66	41.81	41.81	23.98		30.00		23.98	
HT40	MCS0	2	62	5310	36.46	36.66	41.99	42.17	23.98		30.00		23.98	
VHT80	MCS0	2	58	5290	76.36	76.48	84.08	83.92	23.98		30.00		23.98	

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

FCC Band II															
Mod.	Data Rate	N <sub>TX</sub>	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	1	52	5260	0.10	0.10	15.81	15.80		23.98	23.98	-4.60	-6.80	26.99	Pass
11a	6Mbps	1	60	5300	0.10	0.10	15.90	15.63		23.98	23.98	-4.60	-6.80	26.99	Pass
11a	6Mbps	1	64	5320	0.10	0.10	15.92	15.61		23.98	23.98	-4.60	-6.80	26.99	Pass
HT20	MCS0	1	52	5260	0.09	0.10	13.78	13.69		23.98	23.98	-4.60	-6.80	26.99	Pass
HT20	MCS0	1	60	5300	0.09	0.10	13.91	13.86		23.98	23.98	-4.60	-6.80	26.99	Pass
HT20	MCS0	1	64	5320	0.09	0.10	13.89	13.79		23.98	23.98	-4.60	-6.80	26.99	Pass
HT40	MCS0	1	54	5270	0.18	0.21	13.90	13.77		23.98	23.98	-4.60	-6.80	26.99	Pass
HT40	MCS0	1	62	5310	0.18	0.21	13.72	13.75		23.98	23.98	-4.60	-6.80	26.99	Pass
VHT20	MCS0	1	52	5260	0.11	0.09	13.72	13.65		23.98	23.98	-4.60	-6.80	26.99	Pass
VHT20	MCS0	1	60	5300	0.11	0.09	13.84	13.79		23.98	23.98	-4.60	-6.80	26.99	Pass
VHT20	MCS0	1	64	5320	0.11	0.09	13.83	13.72		23.98	23.98	-4.60	-6.80	26.99	Pass
VHT40	MCS0	1	54	5270	0.16	0.18	13.85	13.73		23.98	23.98	-4.60	-6.80	26.99	Pass
VHT40	MCS0	1	62	5310	0.16	0.18	13.68	13.69		23.98	23.98	-4.60	-6.80	26.99	Pass
VHT80	MCS0	1	58	5290	0.37	0.36	13.93	13.73		23.98	23.98	-4.60	-6.80	26.99	Pass
11a	6Mbps	2	52	5260	0.09	0.10	16.13	15.49	18.83	23.98		-4.60		26.99	Pass
11a	6Mbps	2	60	5300	0.09	0.10	16.22	15.58	18.92	23.98		-4.60		26.99	Pass
11a	6Mbps	2	64	5320	0.09	0.10	16.19	15.66	18.94	23.98		-4.60		26.99	Pass
HT20	MCS0	2	52	5260	0.11	0.10	14.29	13.58	16.96	23.98		-4.60		26.99	Pass
HT20	MCS0	2	60	5300	0.11	0.10	14.31	13.61	16.99	23.98		-4.60		26.99	Pass
HT20	MCS0	2	64	5320	0.11	0.10	14.29	13.60	16.97	23.98		-4.60		26.99	Pass
HT40	MCS0	2	54	5270	0.18	0.18	14.28	13.62	16.98	23.98		-4.60		26.99	Pass
HT40	MCS0	2	62	5310	0.18	0.18	14.22	13.63	16.95	23.98		-4.60		26.99	Pass
VHT20	MCS0	2	52	5260	0.08	0.10	14.23	13.54	16.91	23.98		-4.60		26.99	Pass
VHT20	MCS0	2	60	5300	0.08	0.10	14.28	13.57	16.95	23.98		-4.60		26.99	Pass
VHT20	MCS0	2	64	5320	0.08	0.10	14.25	13.55	16.92	23.98		-4.60		26.99	Pass
VHT40	MCS0	2	54	5270	0.20	0.18	14.26	13.59	16.95	23.98		-4.60		26.99	Pass
VHT40	MCS0	2	62	5310	0.20	0.18	14.20	13.60	16.92	23.98		-4.60		26.99	Pass
VHT80	MCS0	2	58	5290	0.37	0.36	14.27	13.56	16.94	23.98		-4.60		26.99	Pass

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

Band II														
Mod.	Data Rate	N <sub>TX</sub>	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	0.09	0.10			7.74	11.00	-2.62			
11a	6Mbps	2	60	5300	0.09	0.10			7.91	11.00	-2.62			
11a	6Mbps	2	64	5320	0.09	0.10			8.29	11.00	-2.62			
HT20	MCS0	2	52	5260	0.11	0.10			5.80	11.00	-2.62			
HT20	MCS0	2	60	5300	0.11	0.10			6.33	11.00	-2.62			
HT20	MCS0	2	64	5320	0.11	0.10			6.15	11.00	-2.62			
HT40	MCS0	2	54	5270	0.18	0.18			3.03	11.00	-2.62			
HT40	MCS0	2	62	5310	0.18	0.18			2.91	11.00	-2.62			
VHT80	MCS0	2	58	5290	0.37	0.36			0.01	11.00	-2.62			

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

Band III																
Mod.	Data Rate	N <sub>TX</sub>	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	16.83	16.63	24.83	24.08	23.21		29.21		23.98	----	----	
11a	6Mbps	2	116	5580	16.83	16.68	24.43	24.63	23.22		29.22		23.98	----	----	
11a	6Mbps	2	140	5700	16.78	16.68	24.88	24.93	23.22		29.22		23.98	----	----	
11a	6Mbps	2	144	5720	13.34	13.29	16.94	16.99	22.24		28.24		23.29	2.593	3.192	
HT20	MCS0	2	100	5500	17.93	17.88	25.62	25.18	23.52		29.52		23.98	----	----	
HT20	MCS0	2	116	5580	17.88	17.93	26.47	25.62	23.52		29.52		23.98	----	----	
HT20	MCS0	2	140	5700	17.88	17.93	25.92	25.82	23.52		29.52		23.98	----	----	
HT20	MCS0	2	144	5720	13.89	13.94	17.44	17.79	22.43		28.43		23.41	3.541	3.541	
HT40	MCS0	2	102	5510	36.56	36.56	42.17	42.35	23.98		30.00		23.98	----	----	
HT40	MCS0	2	110	5550	36.66	36.66	41.99	42.17	23.98		30.00		23.98	----	----	
HT40	MCS0	2	134	5670	36.46	36.66	42.08	42.44	23.98		30.00		23.98	----	----	
HT40	MCS0	2	142	5710	33.18	33.28	35.86	36.22	23.98		30.00		23.98	2.623	3.162	
VHT80	MCS0	2	106	5530	76.36	76.36	83.76	83.60	23.98		30.00		23.98	----	----	
VHT80	MCS0	2	138	5690	73.24	73.00	76.88	76.40	23.98		30.00		23.98	2.64	2.64	

**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	1	100	5500	0.10	0.10	15.82	15.84		23.98	23.98	-3.70	-6.20	26.99	Pass
11a	6Mbps	1	116	5580	0.10	0.10	15.67	15.68		23.98	23.98	-3.70	-6.20	26.99	Pass
11a	6Mbps	1	140	5700	0.10	0.10	15.85	15.78		23.98	23.98	-3.70	-6.20	26.99	Pass
11a	6Mbps	1	144	5720	0.10	0.10	15.84	15.65		23.29	23.30	-3.70	-6.20	26.99	Pass
HT20	MCS0	1	100	5500	0.09	0.10	13.74	13.71		23.98	23.98	-3.70	-6.20	26.99	Pass
HT20	MCS0	1	116	5580	0.09	0.10	13.92	13.86		23.98	23.98	-3.70	-6.20	26.99	Pass
HT20	MCS0	1	140	5700	0.09	0.10	13.80	13.69		23.98	23.98	-3.70	-6.20	26.99	Pass
HT20	MCS0	1	144	5720	0.09	0.10	13.75	13.79		23.41	23.50	-3.70	-6.20	26.99	Pass
HT40	MCS0	1	102	5510	0.18	0.21	13.78	13.69		23.98	23.98	-3.70	-6.20	26.99	Pass
HT40	MCS0	1	110	5550	0.18	0.21	13.93	13.88		23.98	23.98	-3.70	-6.20	26.99	Pass
HT40	MCS0	1	134	5670	0.18	0.21	13.70	13.96		23.98	23.98	-3.70	-6.20	26.99	Pass
HT40	MCS0	1	142	5710	0.18	0.21	13.74	13.90		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT20	MCS0	1	100	5500	0.11	0.09	13.65	13.63		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT20	MCS0	1	116	5580	0.11	0.09	13.86	13.77		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT20	MCS0	1	140	5700	0.11	0.09	13.73	13.65		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT20	MCS0	1	144	5720	0.11	0.09	13.66	13.71		23.41	23.50	-3.70	-6.20	26.99	Pass
VHT40	MCS0	1	102	5510	0.16	0.18	13.74	13.65		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT40	MCS0	1	110	5550	0.16	0.18	13.90	13.82		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT40	MCS0	1	134	5670	0.16	0.18	13.66	13.90		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT40	MCS0	1	142	5710	0.16	0.18	13.68	13.86		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT80	MCS0	1	106	5530	0.37	0.36	13.89	13.93		23.98	23.98	-3.70	-6.20	26.99	Pass
VHT80	MCS0	1	138	5690	0.37	0.36	13.69	13.75		23.98	23.98	-3.70	-6.20	26.99	Pass
11a	6Mbps	2	100	5500	0.09	0.10	16.12	15.55	18.86	23.98		-3.70	26.99	Pass	
11a	6Mbps	2	116	5580	0.09	0.10	16.17	15.66	18.93	23.98		-3.70	26.99	Pass	
11a	6Mbps	2	140	5700	0.09	0.10	16.15	15.56	18.88	23.98		-3.70	26.99	Pass	
11a	6Mbps	2	144	5720	0.09	0.10	16.19	15.60	18.92	23.29		-3.70	26.99	Pass	
HT20	MCS0	2	100	5500	0.11	0.10	14.17	13.72	16.96	23.98		-3.70	26.99	Pass	
HT20	MCS0	2	116	5580	0.11	0.10	14.20	13.65	16.95	23.98		-3.70	26.99	Pass	
HT20	MCS0	2	140	5700	0.11	0.10	14.37	13.52	16.98	23.98		-3.70	26.99	Pass	
HT20	MCS0	2	144	5720	0.11	0.10	14.10	13.48	16.81	23.41		-3.70	26.99	Pass	
HT40	MCS0	2	102	5510	0.18	0.18	14.18	13.70	16.96	23.98		-3.70	26.99	Pass	
HT40	MCS0	2	110	5550	0.18	0.18	14.24	13.66	16.97	23.98		-3.70	26.99	Pass	
HT40	MCS0	2	134	5670	0.18	0.18	14.25	13.67	16.98	23.98		-3.70	26.99	Pass	
HT40	MCS0	2	142	5710	0.18	0.18	14.34	13.43	16.92	23.98		-3.70	26.99	Pass	
VHT20	MCS0	2	100	5500	0.08	0.10	14.12	13.66	16.91	23.98		-3.70	26.99	Pass	
VHT20	MCS0	2	116	5580	0.08	0.10	14.11	13.60	16.87	23.98		-3.70	26.99	Pass	
VHT20	MCS0	2	140	5700	0.08	0.10	14.30	13.45	16.91	23.98		-3.70	26.99	Pass	
VHT20	MCS0	2	144	5720	0.08	0.10	14.02	13.44	16.75	23.41		-3.70	26.99	Pass	
VHT40	MCS0	2	102	5510	0.20	0.18	14.14	13.68	16.93	23.98		-3.70	26.99	Pass	
VHT40	MCS0	2	110	5550	0.20	0.18	14.23	13.63	16.95	23.98		-3.70	26.99	Pass	
VHT40	MCS0	2	134	5670	0.20	0.18	14.22	13.62	16.94	23.98		-3.70	26.99	Pass	
VHT40	MCS0	2	142	5710	0.20	0.18	14.33	13.40	16.90	23.98		-3.70	26.99	Pass	
VHT80	MCS0	2	106	5530	0.37	0.36	14.16	13.77	16.98	23.98		-3.70	26.99	Pass	
VHT80	MCS0	2	138	5690	0.37	0.36	13.98	13.54	16.78	23.98		-3.70	26.99	Pass	

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

Band III														
Mod.	Data Rate	N <sub>TX</sub>	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	0.09	0.10	8.07 8.18 8.22 <b>8.79</b> 6.25 6.01 6.46 6.47 3.16 2.85	11.00	-1.85	-1.85 -1.85 -1.85 -1.85 -1.85 -1.85 -1.85 -1.85 -1.85 -1.85	Pass Pass Pass Pass Pass Pass Pass Pass Pass Pass			
11a	6Mbps	2	116	5580	0.09	0.10								
11a	6Mbps	2	140	5700	0.09	0.10								
11a	6Mbps	2	144	5720	0.09	0.10								
HT20	MCS0	2	100	5500	0.11	0.10								
HT20	MCS0	2	116	5580	0.11	0.10								
HT20	MCS0	2	140	5700	0.11	0.10								
HT20	MCS0	2	144	5720	0.11	0.10								
HT40	MCS0	2	102	5510	0.18	0.18								
HT40	MCS0	2	110	5550	0.18	0.18								
HT40	MCS0	2	134	5670	0.18	0.18								
HT40	MCS0	2	142	5710	0.18	0.18								
VHT80	MCS0	2	106	5530	0.37	0.36								
VHT80	MCS0	2	138	5690	0.37	0.36								



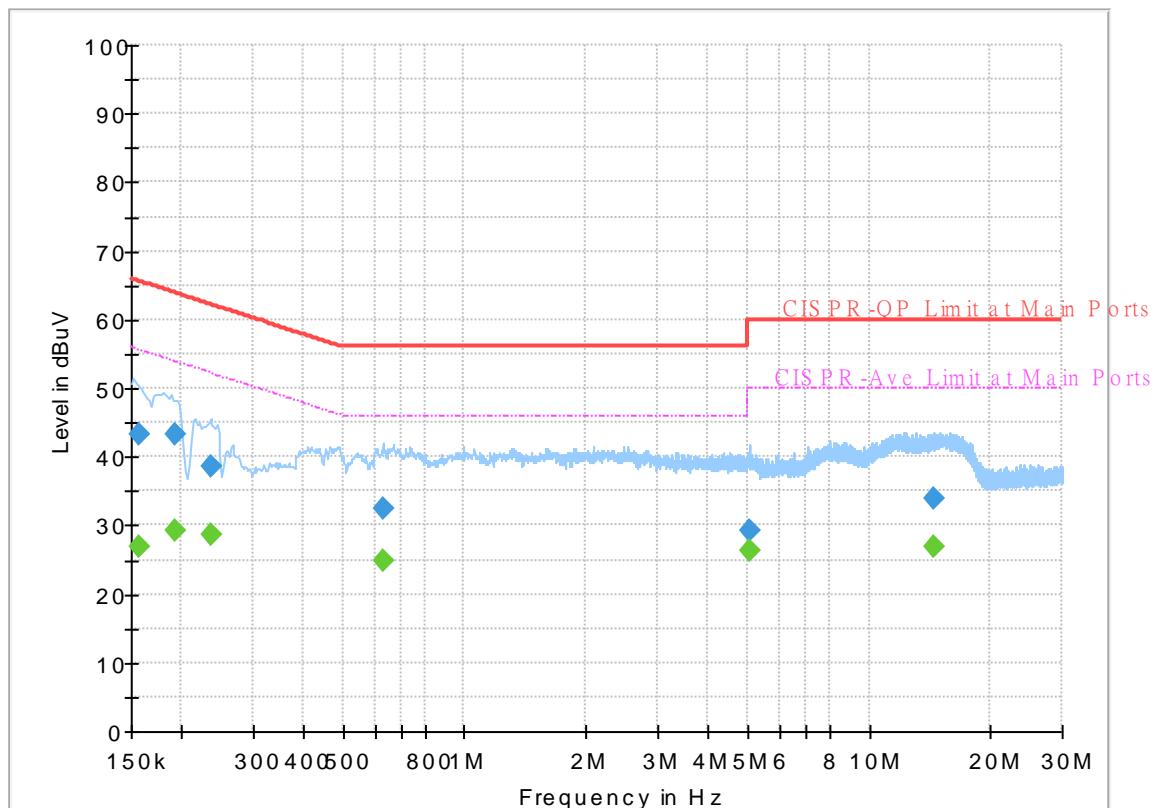
## Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%

## EUT Information

Report NO : 800518  
 Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Line

Full Spectrum



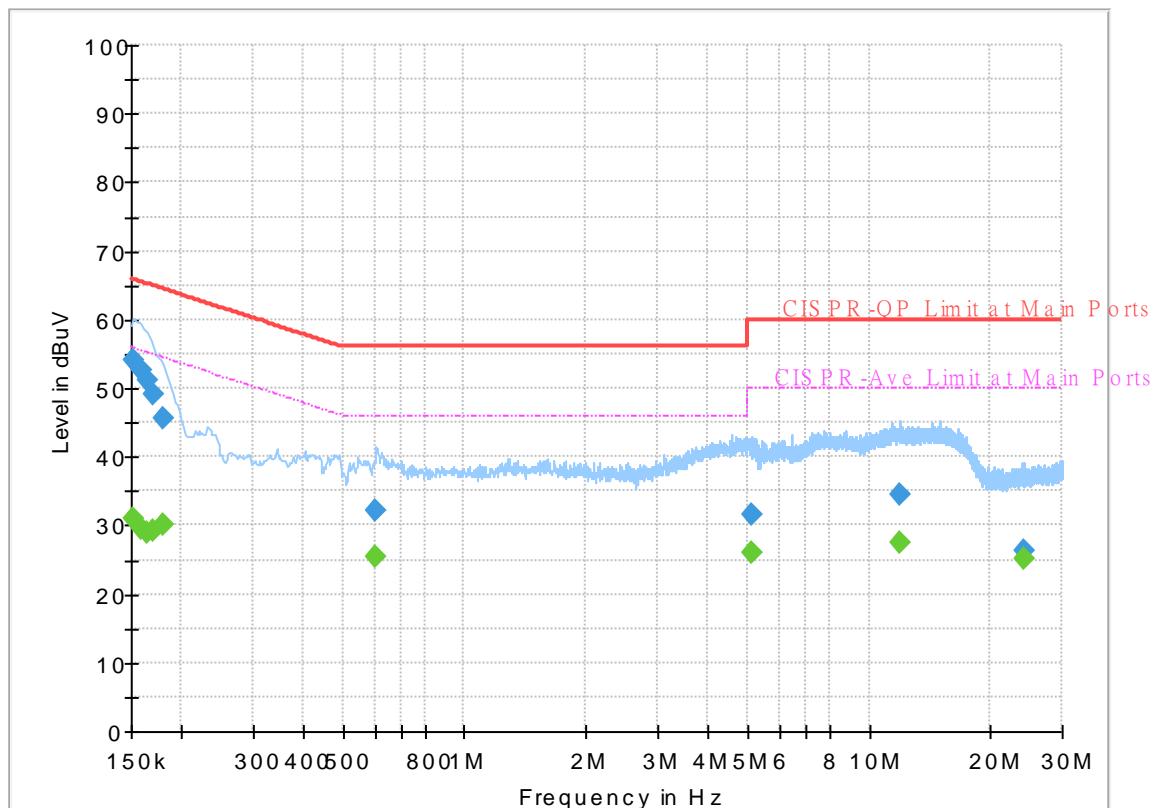
## Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.156750	---	26.91	55.63	28.72	L1	OFF	19.5
0.156750	43.20	---	65.63	22.43	L1	OFF	19.5
0.192750	---	29.16	53.92	24.76	L1	OFF	19.5
0.192750	43.31	---	63.92	20.61	L1	OFF	19.5
0.235500	---	28.77	52.25	23.48	L1	OFF	19.5
0.235500	38.54	---	62.25	23.71	L1	OFF	19.5
0.627000	---	24.78	46.00	21.22	L1	OFF	19.6
0.627000	32.32	---	56.00	23.68	L1	OFF	19.6
5.070750	---	26.17	50.00	23.83	L1	OFF	19.7
5.070750	29.35	---	60.00	30.65	L1	OFF	19.7
14.518500	---	26.76	50.00	23.24	L1	OFF	20.1
14.518500	33.89	---	60.00	26.11	L1	OFF	20.1

## EUT Information

Report NO : 800518  
 Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Neutral

Full Spectrum



## Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	30.93	55.88	24.95	N	OFF	19.5
0.152250	54.06	---	65.88	11.82	N	OFF	19.5
0.159000	---	29.42	55.52	26.10	N	OFF	19.5
0.159000	52.59	---	65.52	12.93	N	OFF	19.5
0.163500	---	28.84	55.28	26.44	N	OFF	19.5
0.163500	51.24	---	65.28	14.04	N	OFF	19.5
0.170250	---	29.35	54.95	25.60	N	OFF	19.5
0.170250	49.13	---	64.95	15.82	N	OFF	19.5
0.179250	---	30.26	54.52	24.26	N	OFF	19.5
0.179250	45.70	---	64.52	18.82	N	OFF	19.5
0.604500	---	25.30	46.00	20.70	N	OFF	19.6
0.604500	32.22	---	56.00	23.78	N	OFF	19.6
5.109000	---	26.13	50.00	23.87	N	OFF	19.7
5.109000	31.56	---	60.00	28.44	N	OFF	19.7
11.982750	---	27.38	50.00	22.62	N	OFF	20.0
11.982750	34.62	---	60.00	25.38	N	OFF	20.0
24.207000	---	25.25	50.00	24.75	N	OFF	20.5
24.207000	26.41	---	60.00	33.59	N	OFF	20.5



## Appendix C. Radiated Spurious Emission

Test Engineer :	Watt Tseng, Karl Hou, and Bigshow Wang	Temperature :		24~26°C	
		Relative Humidity :		50~55%	

### Band 1 - 5150~5250MHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	Pos	Pos	Avg.
1+2		5144.56	50.87	-23.13	74	40.54	31.8	8.63	30.1	203	345	P	H
802.11a CH 36 5180MHz		5149.76	41.81	-12.19	54	31.48	31.8	8.63	30.1	203	345	A	H
	*	5180	105.64	-	-	95.42	31.67	8.65	30.1	203	345	P	H
	*	5180	98.12	-	-	87.9	31.67	8.65	30.1	203	345	A	H
													H
													H
		5038.48	50.74	-23.26	74	40.34	31.9	8.58	30.08	246	302	P	V
		5135.46	41.15	-12.85	54	30.79	31.83	8.63	30.1	246	302	A	V
	*	5180	102.05	-	-	91.83	31.67	8.65	30.1	246	302	P	V
	*	5180	94.32	-	-	84.1	31.67	8.65	30.1	246	302	A	V
													V
802.11a CH 44 5220MHz		5080.08	50.03	-23.97	74	39.62	31.9	8.6	30.09	203	347	P	H
		5107.64	41.07	-12.93	54	30.68	31.87	8.61	30.09	203	347	A	H
	*	5220	105.59	-	-	95.47	31.53	8.7	30.11	203	347	P	H
	*	5220	97.69	-	-	87.57	31.53	8.7	30.11	203	347	A	H
		5361.44	50.29	-23.71	74	39.92	31.47	9.02	30.12	203	347	P	H
		5452.72	41.21	-12.79	54	30.53	31.7	9.12	30.14	203	347	A	H
		5092.3	50.01	-23.99	74	39.59	31.9	8.61	30.09	246	19	P	V
		5094.38	41.11	-12.89	54	30.69	31.9	8.61	30.09	246	19	A	V
	*	5220	101.94	-	-	91.82	31.53	8.7	30.11	246	19	P	V
	*	5220	94.26	-	-	84.14	31.53	8.7	30.11	246	19	A	V
		5436.48	50.97	-23.03	74	40.31	31.67	9.12	30.13	246	19	P	V
		5407.64	41.11	-12.89	54	30.53	31.6	9.11	30.13	246	19	A	V



		5028.08	51.03	-22.97	74	40.74	31.8	8.57	30.08	204	344	P	H		
		5119.34	40.98	-13.02	54	30.59	31.87	8.62	30.1	204	344	A	H		
802.11a		*	5240	106.16	-	-	96.05	31.47	8.75	30.11	204	344	P	H	
CH 48		*	5240	98.07	-	-	87.96	31.47	8.75	30.11	204	344	A	H	
5240MHz			5414.36	50.23	-23.77	74	39.62	31.63	9.11	30.13	204	344	P	H	
			5393.08	41.16	-12.84	54	30.67	31.53	9.09	30.13	204	344	A	H	
			5127.14	50.35	-23.65	74	40	31.83	8.62	30.1	234	302	P	V	
			5070.98	41.02	-12.98	54	30.61	31.9	8.6	30.09	234	302	A	V	
			*	5240	102.08	-	-	91.97	31.47	8.75	30.11	234	302	P	V
			*	5240	94.14	-	-	84.03	31.47	8.75	30.11	234	302	A	V
				5431.72	51.7	-22.3	74	41.04	31.67	9.12	30.13	234	302	P	V
				5438.72	41.11	-12.89	54	30.45	31.67	9.12	30.13	234	302	A	V
Remark		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



## Band 1 5150~5250MHz

## WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	44.48	-23.72	68.2	53.13	39.37	13.33	61.35	100	0	P	H
		15540	45.21	-28.79	74	53.05	37.93	16.67	62.44	100	0	P	H
		10360	45.45	-22.75	68.2	54.1	39.37	13.33	61.35	100	0	P	V
		15540	44.46	-29.54	74	52.3	37.93	16.67	62.44	100	0	P	V
802.11a CH 44 5220MHz		10440	44.12	-24.08	68.2	52.7	39.53	13.38	61.49	100	0	P	H
		15660	43.73	-30.27	74	51.65	37.45	16.87	62.24	100	0	P	H
		10440	44.59	-23.61	68.2	53.17	39.53	13.38	61.49	100	0	P	V
		15660	44.46	-29.54	74	52.38	37.45	16.87	62.24	100	0	P	V
802.11a CH 48 5240MHz		10480	44.69	-23.51	68.2	53.27	39.58	13.4	61.56	100	0	P	H
		15720	44.65	-29.35	74	52.55	37.3	16.95	62.15	100	0	P	H
		10480	45.01	-23.19	68.2	53.59	39.58	13.4	61.56	100	0	P	V
		15720	44.27	-29.73	74	52.17	37.3	16.95	62.15	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 1 5150~5250MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5087.1	50.48	-23.52	74	40.07	31.9	8.6	30.09	223	344	P	H
		5150	42.26	-11.74	54	31.92	31.8	8.64	30.1	223	344	A	H
	*	5190	101.53	-	-	91.31	31.67	8.65	30.1	223	344	P	H
	*	5190	93.88	-	-	83.66	31.67	8.65	30.1	223	344	A	H
		5459.44	50.66	-23.34	74	39.98	31.7	9.12	30.14	223	344	P	H
		5412.96	43.21	-10.79	54	32.6	31.63	9.11	30.13	223	344	A	H
		5095.68	51.19	-22.81	74	40.77	31.9	8.61	30.09	228	293	P	V
		5136.5	41.61	-12.39	54	31.25	31.83	8.63	30.1	228	293	A	V
	*	5190	96.97	-	-	86.75	31.67	8.65	30.1	228	293	P	V
	*	5190	89.25	-	-	79.03	31.67	8.65	30.1	228	293	A	V
802.11n HT40 CH 46 5230MHz		5431.72	50.89	-23.11	74	40.23	31.67	9.12	30.13	228	293	P	V
		5418	41.72	-12.28	54	31.11	31.63	9.11	30.13	228	293	A	V
		5003.9	50.65	-23.35	74	40.47	31.7	8.56	30.08	213	343	P	H
		5137.28	41.85	-12.15	54	31.49	31.83	8.63	30.1	213	343	A	H
	*	5230	100.29	-	-	90.2	31.47	8.73	30.11	213	343	P	H
	*	5230	92.83	-	-	82.74	31.47	8.73	30.11	213	343	A	H
		5452.16	50.67	-23.33	74	39.99	31.7	9.12	30.14	213	343	P	H
		5452.44	41.92	-12.08	54	31.24	31.7	9.12	30.14	213	343	A	H
		5042.64	50.84	-23.16	74	40.45	31.9	8.58	30.09	227	305	P	V
		5064.74	41.31	-12.69	54	30.91	31.9	8.59	30.09	227	305	A	V
Remark	*	5230	94.03	-	-	83.94	31.47	8.73	30.11	227	305	P	V
	*	5230	87.35	-	-	77.26	31.47	8.73	30.11	227	305	A	V
		5455.24	49.79	-24.21	74	39.11	31.7	9.12	30.14	227	305	P	V
		5453.28	42.07	-11.93	54	31.39	31.7	9.12	30.14	227	305	A	V
		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



## Band 1 5150~5250MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11n  HT40  CH 38  5190MHz		10380	44.78	-23.42	68.2	53.39	39.43	13.34	61.38	100	0	P	H
		15570	44.54	-29.46	74	52.43	37.77	16.73	62.39	100	0	P	H
		10380	44.39	-23.81	68.2	53	39.43	13.34	61.38	100	0	P	V
		15570	44.46	-29.54	74	52.35	37.77	16.73	62.39	100	0	P	V
802.11n  HT40  CH 46  5230MHz		10460	45.6	-22.6	68.2	54.19	39.55	13.39	61.53	100	0	P	H
		15690	43.73	-30.27	74	51.66	37.35	16.92	62.2	100	0	P	H
		10460	45.23	-22.97	68.2	53.82	39.55	13.39	61.53	100	0	P	V
		15690	44.08	-29.92	74	52.01	37.35	16.92	62.2	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 1 5150~5250MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5087.1	50.96	-23.04	74	40.55	31.9	8.6	30.09	214	344	P	H
		5145.86	42.25	-11.75	54	31.92	31.8	8.63	30.1	214	344	A	H
	*	5210	97.8	-	-	87.7	31.53	8.68	30.11	214	344	P	H
	*	5210	90.08	-	-	79.98	31.53	8.68	30.11	214	344	A	H
		5439.28	51.57	-22.43	74	40.91	31.67	9.12	30.13	214	344	P	H
		5366.2	41.49	-12.51	54	31.11	31.47	9.03	30.12	214	344	A	H
		5031.98	50.69	-23.31	74	40.39	31.8	8.58	30.08	211	300	P	V
		5091.52	41.69	-12.31	54	31.27	31.9	8.61	30.09	211	300	A	V
	*	5210	93.53	-	-	83.43	31.53	8.68	30.11	211	300	P	V
	*	5210	85.44	-	-	75.34	31.53	8.68	30.11	211	300	A	V
		5418.56	50.79	-23.21	74	40.18	31.63	9.11	30.13	211	300	P	V
		5450.76	41.53	-12.47	54	30.85	31.7	9.12	30.14	211	300	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

## Band 1 5150~5250MHz

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

WIFI	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		10420	44.78	-23.42	68.2	53.36	39.52	13.36	61.46	100	0	P	H
		15630	45.4	-28.6	74	53.37	37.5	16.82	62.29	100	0	P	H
		10420	44.77	-23.43	68.2	53.35	39.52	13.36	61.46	100	0	P	V
		15630	45.52	-28.48	74	53.49	37.5	16.82	62.29	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 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 )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a CH 52 5260MHz		5089.08	49.94	-24.06	74	39.53	31.9	8.6	30.09	216	346	P	H
		5042.16	40.99	-13.01	54	30.6	31.9	8.58	30.09	216	346	A	H
	*	5260	105.84	-	-	95.75	31.4	8.8	30.11	216	346	P	H
	*	5260	97.91	-	-	87.82	31.4	8.8	30.11	216	346	A	H
		5456.88	50.23	-23.77	74	39.55	31.7	9.12	30.14	216	346	P	H
		5368.32	41.16	-12.84	54	30.77	31.47	9.04	30.12	216	346	A	H
		5098.6	49.91	-24.09	74	39.49	31.9	8.61	30.09	242	18	P	V
		5092.82	40.93	-13.07	54	30.51	31.9	8.61	30.09	242	18	A	V
	*	5260	101.65	-	-	91.56	31.4	8.8	30.11	242	18	P	V
	*	5260	94.18	-	-	84.09	31.4	8.8	30.11	242	18	A	V
802.11a CH 60 5300MHz		5376.24	49.87	-24.13	74	39.47	31.47	9.06	30.13	242	18	P	V
		5453.76	41.07	-12.93	54	30.39	31.7	9.12	30.14	242	18	A	V
		5124.1	50.05	-23.95	74	39.7	31.83	8.62	30.1	210	344	P	H
		5055.76	40.95	-13.05	54	30.55	31.9	8.59	30.09	210	344	A	H
	*	5300	105.72	-	-	95.55	31.4	8.89	30.12	210	344	P	H
	*	5300	98.26	-	-	88.09	31.4	8.89	30.12	210	344	A	H
		5359.92	51.62	-22.38	74	41.32	31.4	9.02	30.12	210	344	P	H
		5350.32	42.35	-11.65	54	32.07	31.4	9	30.12	210	344	A	H
		5130.22	49.98	-24.02	74	39.62	31.83	8.63	30.1	238	18	P	V
		5061.2	40.88	-13.12	54	30.48	31.9	8.59	30.09	238	18	A	V
802.11a CH 60 5300MHz	*	5300	102.51	-	-	92.34	31.4	8.89	30.12	238	18	P	V
	*	5300	94.22	-	-	84.05	31.4	8.89	30.12	238	18	A	V
		5424.24	50.86	-23.14	74	40.25	31.63	9.11	30.13	238	18	P	V
		5360.16	41.31	-12.69	54	31.01	31.4	9.02	30.12	238	18	A	V



<b>802.11a CH 64 5320MHz</b>	*	5320	105.93	-	-	95.72	31.4	8.93	30.12	205	344	P	H
	*	5320	98.22	-	-	88.01	31.4	8.93	30.12	205	344	A	H
		5356.32	51.99	-22.01	74	41.7	31.4	9.01	30.12	205	344	P	H
		5353.6	42.54	-11.46	54	32.25	31.4	9.01	30.12	205	344	A	H
	*	5320	101.99	-	-	91.78	31.4	8.93	30.12	273	330	P	V
	*	5320	94.45	-	-	84.24	31.4	8.93	30.12	273	330	A	V
		5367.84	50.24	-23.76	74	39.85	31.47	9.04	30.12	273	330	P	V
		5353.6	41.41	-12.59	54	31.12	31.4	9.01	30.12	273	330	A	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 2 5250~5350MHz

## WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	44.31	-23.89	68.2	52.89	39.63	13.41	61.62	100	0	P	H
		15780	44	-30	74	51.72	37.3	17.03	62.05	100	0	P	H
		10520	44.44	-23.76	68.2	53.02	39.63	13.41	61.62	100	0	P	V
		15780	44.47	-29.53	74	52.19	37.3	17.03	62.05	100	0	P	V
802.11a CH 60 5300MHz		10600	45.52	-28.48	74	54	39.8	13.4	61.68	100	0	P	H
		15900	43.88	-30.12	74	51.55	37	17.19	61.86	100	0	P	H
		10600	45.22	-28.78	74	53.7	39.8	13.4	61.68	100	0	P	V
		15900	43.32	-30.68	74	50.99	37	17.19	61.86	100	0	P	V
802.11a CH 64 5320MHz		10640	45.5	-28.5	74	54.01	39.8	13.4	61.71	100	0	P	H
		15960	42.74	-31.26	74	50.4	36.93	17.17	61.76	100	0	P	H
		10640	44.74	-29.26	74	53.25	39.8	13.4	61.71	100	0	P	V
		15960	44.9	-29.1	74	52.56	36.93	17.17	61.76	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 2 5250~5350MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n  HT40  CH 54  5270MHz		5138.72	51.43	-22.57	74	41.07	31.83	8.63	30.1	211	343	P	H
		5113.22	41.44	-12.56	54	31.04	31.87	8.62	30.09	211	343	A	H
	*	5270	101.43	-	-	91.32	31.4	8.82	30.11	211	343	P	H
	*	5270	93.95	-	-	83.84	31.4	8.82	30.11	211	343	A	H
		5413.92	50.49	-23.51	74	39.88	31.63	9.11	30.13	211	343	P	H
		5353.2	41.82	-12.18	54	31.54	31.4	9	30.12	211	343	A	H
		5136	49.15	-24.85	74	38.79	31.83	8.63	30.1	225	281	P	V
		5081.26	41.34	-12.66	54	30.93	31.9	8.6	30.09	225	281	A	V
	*	5270	97.02	-	-	86.91	31.4	8.82	30.11	225	281	P	V
	*	5270	89.34	-	-	79.23	31.4	8.82	30.11	225	281	A	V
802.11n  HT40  CH 62  5310MHz		5416.32	51.72	-22.28	74	41.11	31.63	9.11	30.13	225	281	P	V
		5435.28	41.72	-12.28	54	31.06	31.67	9.12	30.13	225	281	A	V
		5037.74	50.53	-23.47	74	40.13	31.9	8.58	30.08	213	343	P	H
		5085	41.58	-12.42	54	31.17	31.9	8.6	30.09	213	343	A	H
	*	5310	101.44	-	-	91.25	31.4	8.91	30.12	213	343	P	H
	*	5310	93.78	-	-	83.59	31.4	8.91	30.12	213	343	A	H
		5351.04	55.48	-18.52	74	45.2	31.4	9	30.12	213	343	P	H
		5351.52	46.49	-7.51	54	36.21	31.4	9	30.12	213	343	A	H
		5139.06	49.7	-24.3	74	39.34	31.83	8.63	30.1	213	291	P	V
		5077.52	41.2	-12.8	54	30.79	31.9	8.6	30.09	213	291	A	V
Remark	*	5310	96.58	-	-	86.39	31.4	8.91	30.12	213	291	P	V
	*	5310	88.88	-	-	78.69	31.4	8.91	30.12	213	291	A	V
		5354.88	51.84	-22.16	74	41.55	31.4	9.01	30.12	213	291	P	V
		5351.76	42.97	-11.03	54	32.69	31.4	9	30.12	213	291	A	V
		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



## Band 2 5250~5350MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11n  HT40  CH 54  5270MHz		10540	44.09	-24.11	68.2	52.64	39.67	13.41	61.63	100	0	P	H
		15810	44	-30	74	51.62	37.3	17.08	62	100	0	P	H
		10540	44.56	-23.64	68.2	53.11	39.67	13.41	61.63	100	0	P	V
		15810	44.45	-29.55	74	52.07	37.3	17.08	62	100	0	P	V
802.11n  HT40  CH 62  5310MHz		10620	45.27	-28.73	74	53.76	39.8	13.41	61.7	100	0	P	H
		15930	44.57	-29.43	74	52.22	36.97	17.19	61.81	400	0	P	H
		10620	45.23	-28.77	74	53.72	39.8	13.41	61.7	100	0	P	V
		15930	45.2	-28.8	74	52.85	36.97	17.19	61.81	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 2 5250~5350MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11ac VHT80 CH 58 5290MHz		5007.14	51.04	-22.96	74	40.86	31.7	8.56	30.08	210	344	P	H
		5065.96	41.42	-12.58	54	31.02	31.9	8.59	30.09	210	344	A	H
	*	5290	97.76	-	-	87.61	31.4	8.86	30.11	210	344	P	H
	*	5290	90.3	-	-	80.15	31.4	8.86	30.11	210	344	A	H
		5350.08	56.49	-17.51	74	46.21	31.4	9	30.12	210	344	P	H
		5353.2	48.75	-5.25	54	38.47	31.4	9	30.12	210	344	A	H
		5099.96	49.69	-24.31	74	39.27	31.9	8.61	30.09	218	291	P	V
		5064.26	41.66	-12.34	54	31.26	31.9	8.59	30.09	218	291	A	V
	*	5290	93.03	-	-	82.88	31.4	8.86	30.11	218	291	P	V
	*	5290	85.7	-	-	75.55	31.4	8.86	30.11	218	291	A	V
		5355.12	53.15	-20.85	74	42.86	31.4	9.01	30.12	218	291	P	V
		5355.6	44.3	-9.7	54	34.01	31.4	9.01	30.12	218	291	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

## Band 2 5250~5350MHz

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

WIFI	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak ( P/A )	Pol. ( H/V )
802.11ac VHT80 CH 58 5290MHz		10580	44.99	-23.21	68.2	53.47	39.77	13.41	61.66	100	0	P	H
		15870	44.45	-29.55	74	52.14	37.06	17.16	61.91	100	0	P	H
		10580	44.74	-23.46	68.2	53.22	39.77	13.41	61.66	100	0	P	V
		15870	44.46	-29.54	74	52.15	37.06	17.16	61.91	100	0	P	V
Remark	1. No other spurious found. 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 )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a CH 100 5500MHz		5445.36	51.4	-22.6	74	40.74	31.67	9.12	30.13	201	344	P	H
		5464.08	50.72	-17.48	68.2	40.04	31.7	9.12	30.14	201	344	P	H
		5453.36	41.57	-12.43	54	30.89	31.7	9.12	30.14	201	344	A	H
	*	5500	103.17	-	-	92.48	31.7	9.13	30.14	201	344	P	H
	*	5500	95.53	-	-	84.84	31.7	9.13	30.14	201	344	A	H
													H
		5456.88	50.02	-23.98	74	39.34	31.7	9.12	30.14	234	20	P	V
		5468.88	50.5	-17.7	68.2	39.82	31.7	9.12	30.14	234	20	P	V
		5445.36	41.44	-12.56	54	30.78	31.67	9.12	30.13	234	20	A	V
	*	5500	102.24	-	-	91.55	31.7	9.13	30.14	234	20	P	V
	*	5500	94.85	-	-	84.16	31.7	9.13	30.14	234	20	A	V
													V
802.11a CH 116 5580MHz		5402.32	51.82	-22.18	74	41.24	31.6	9.11	30.13	193	344	P	H
		5467.84	48.93	-19.27	68.2	38.25	31.7	9.12	30.14	193	344	P	H
		5451.52	41.07	-12.93	54	30.39	31.7	9.12	30.14	193	344	A	H
	*	5580	102.35	-	-	91.59	31.8	9.15	30.19	193	344	P	H
	*	5580	94.67	-	-	83.91	31.8	9.15	30.19	193	344	A	H
		5725	50.18	-18.02	68.2	39.13	31.93	9.38	30.26	193	344	P	H
		5363.44	50.78	-23.22	74	40.4	31.47	9.03	30.12	249	330	P	V
		5469.76	49.81	-18.39	68.2	39.13	31.7	9.12	30.14	249	330	P	V
		5449.84	41.23	-12.77	54	30.55	31.7	9.12	30.14	249	330	A	V
	*	5580	101.78	-	-	91.02	31.8	9.15	30.19	249	330	P	V
	*	5580	93.74	-	-	82.98	31.8	9.15	30.19	249	330	A	V
		5733.185	50.04	-18.16	68.2	38.98	31.93	9.4	30.27	249	330	P	V



## FCC RADIO TEST REPORT

Report No. : FR800518E

<b>802.11a CH 140 5700MHz</b>	*	5700	102.81	-	-	91.92	31.8	9.34	30.25	198	302	P	H
	*	5700	95.15	-	-	84.26	31.8	9.34	30.25	198	302	A	H
		5748.84	51.99	-16.21	68.2	40.83	32	9.43	30.27	198	302	P	H
													H
													H
													H
	*	5700	100.09	-	-	89.2	31.8	9.34	30.25	255	347	P	V
	*	5700	92.39	-	-	81.5	31.8	9.34	30.25	255	347	A	V
		5748.04	50.92	-17.28	68.2	39.77	32	9.42	30.27	255	347	P	V
													V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 3 - 5470~5725MHz

## WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		11000	46.14	-27.86	74	54.3	40.4	13.44	62	100	0	P	H
		16500	46.96	-21.24	68.2	50.75	38.6	17.21	59.6	100	0	P	H
		11000	45.74	-28.26	74	53.9	40.4	13.44	62	100	0	P	V
		16500	46.22	-21.98	68.2	50.01	38.6	17.21	59.6	100	0	P	V
802.11a CH 116 5580MHz		11160	45.31	-28.69	74	53.39	39.93	13.67	61.68	100	0	P	H
		16740	47.36	-20.84	68.2	49.8	39.78	17.48	59.7	100	0	P	H
		11160	46.24	-27.76	74	54.32	39.93	13.67	61.68	100	0	P	V
		16740	51.64	-16.56	68.2	54.08	39.78	17.48	59.7	100	0	P	V
802.11a CH 140 5700MHz		11400	44.92	-29.08	74	52.15	40	13.97	61.2	100	0	P	H
		17100	49.22	-18.98	68.2	50.74	40.5	17.66	59.68	100	0	P	H
		11400	45.16	-28.84	74	52.39	40	13.97	61.2	100	0	P	V
		17100	48.25	-19.95	68.2	49.77	40.5	17.66	59.68	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 3 - 5470~5725MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11n  HT40  CH 102  5510MHz		5444.32	50.8	-23.2	74	40.14	31.67	9.12	30.13	198	343	P	H
		5467.84	49.53	-18.67	68.2	38.85	31.7	9.12	30.14	198	343	P	H
		5448.64	41.88	-12.12	54	31.19	31.7	9.12	30.13	198	343	A	H
	*	5510	99.05	-	-	88.37	31.7	9.13	30.15	198	343	P	H
	*	5510	91.38	-	-	80.7	31.7	9.13	30.15	198	343	A	H
		5733.5	51.33	-16.87	68.2	40.27	31.93	9.4	30.27	198	343	P	H
		5376.64	50.72	-23.28	74	40.32	31.47	9.06	30.13	201	17	P	V
		5469.76	51.13	-17.07	68.2	40.45	31.7	9.12	30.14	201	17	P	V
		5440.72	42.01	-11.99	54	31.35	31.67	9.12	30.13	201	17	A	V
	*	5510	95.34	-	-	84.66	31.7	9.13	30.15	201	17	P	V
	*	5510	87.54	-	-	76.86	31.7	9.13	30.15	201	17	A	V
		5762.165	50.67	-17.53	68.2	39.44	32.07	9.45	30.29	201	17	P	V
802.11n  HT40  CH 110  5550MHz		5420.8	50.69	-23.31	74	40.08	31.63	9.11	30.13	194	343	P	H
		5469.52	50.82	-17.38	68.2	40.14	31.7	9.12	30.14	194	343	P	H
		5457.04	41.58	-12.42	54	30.9	31.7	9.12	30.14	194	343	A	H
	*	5550	98.16	-	-	87.39	31.8	9.14	30.17	194	343	P	H
	*	5550	90.29	-	-	79.52	31.8	9.14	30.17	194	343	A	H
		5734.13	50.69	-17.51	68.2	39.63	31.93	9.4	30.27	194	343	P	H
		5380.72	49.8	-24.2	74	39.33	31.53	9.07	30.13	207	18	P	V
		5468.32	49.43	-18.77	68.2	38.75	31.7	9.12	30.14	207	18	P	V
		5414.08	41.39	-12.61	54	30.78	31.63	9.11	30.13	207	18	A	V
	*	5550	95.44	-	-	84.67	31.8	9.14	30.17	207	18	P	V
	*	5550	87.82	-	-	77.05	31.8	9.14	30.17	207	18	A	V
		5760.59	50.97	-17.23	68.2	39.74	32.07	9.45	30.29	207	18	P	V



802.11n HT40 CH 134 5670MHz		5432.25	50.34	-23.66	74	39.68	31.67	9.12	30.13	198	299	P	H
		5463.05	50.75	-17.45	68.2	40.07	31.7	9.12	30.14	198	299	P	H
		5452.9	41.62	-12.38	54	30.94	31.7	9.12	30.14	198	299	A	H
	*	5670	96.85	-	-	86.05	31.75	9.28	30.23	198	299	P	H
	*	5670	89.26	-	-	78.46	31.75	9.28	30.23	198	299	A	H
		5759.05	51.32	-16.88	68.2	40.1	32.07	9.44	30.29	198	299	P	H
		5381.85	50.72	-23.28	74	40.25	31.53	9.07	30.13	219	342	P	V
		5470	50.58	-17.62	68.2	39.9	31.7	9.12	30.14	219	342	P	V
		5401.45	41.55	-12.45	54	30.97	31.6	9.11	30.13	219	342	A	V
	*	5670	95.22	-	-	84.42	31.75	9.28	30.23	219	342	P	V
	*	5670	87.66	-	-	76.86	31.75	9.28	30.23	219	342	A	V
		5755.725	50.8	-17.4	68.2	39.56	32.07	9.44	30.27	219	342	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 3 - 5470~5725MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		11020	47.08	-26.92	74	55.24	40.33	13.47	61.96	100	0	P	H
		16530	46.62	-21.58	68.2	50.29	38.7	17.24	59.61	100	0	P	H
		11020	45.85	-28.15	74	54.01	40.33	13.47	61.96	100	0	P	V
		16530	46.06	-22.14	68.2	49.73	38.7	17.24	59.61	100	0	P	V
802.11n HT40 CH 110 5550MHz		11100	46.34	-27.66	74	54.61	40	13.53	61.8	100	0	P	H
		16650	45.87	-22.33	68.2	48.92	39.2	17.41	59.66	100	0	P	H
		11100	45.77	-28.23	74	54.04	40	13.53	61.8	100	0	P	V
		16650	45.22	-22.98	68.2	48.27	39.2	17.41	59.66	100	0	P	V
802.11n HT40 CH 134 5670MHz		11340	46.22	-27.78	74	53.67	39.87	14	61.32	100	0	P	H
		17010	47.57	-20.63	68.2	49.32	40.5	17.54	59.79	100	0	P	H
		11340	45.15	-28.85	74	52.6	39.87	14	61.32	100	0	P	V
		17010	47.03	-21.17	68.2	48.78	40.5	17.54	59.79	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 3 - 5470~5725MHz

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5445.04	50.5	-23.5	74	39.84	31.67	9.12	30.13	199	342	P	H
		5461.6	49.65	-18.55	68.2	38.97	31.7	9.12	30.14	199	342	P	H
		5451.76	41.83	-12.17	54	31.15	31.7	9.12	30.14	199	342	A	H
	*	5530	94.3	-	-	83.6	31.73	9.14	30.17	199	342	P	H
	*	5530	86.85	-	-	76.15	31.73	9.14	30.17	199	342	A	H
		5749.565	50.79	-17.41	68.2	39.63	32	9.43	30.27	199	342	P	H
		5446	50.57	-23.43	74	39.88	31.7	9.12	30.13	221	19	P	V
		5461.12	50.97	-17.23	68.2	40.29	31.7	9.12	30.14	221	19	P	V
		5450.32	41.73	-12.27	54	31.05	31.7	9.12	30.14	221	19	A	V
	*	5530	92.69	-	-	81.99	31.73	9.14	30.17	221	19	P	V
	*	5530	84.94	-	-	74.24	31.73	9.14	30.17	221	19	A	V
		5753.345	50.48	-17.72	68.2	39.25	32.07	9.43	30.27	221	19	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

## Band 3 5470~5725MHz

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

WIFI	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		11060	46.26	-27.74	74	54.51	40.13	13.5	61.88	100	0	P	H
		16590	45.92	-22.28	68.2	49.39	38.85	17.32	59.64	100	0	P	H
		11060	46.1	-27.9	74	54.35	40.13	13.5	61.88	100	0	P	V
		16590	46.53	-21.67	68.2	50	38.85	17.32	59.64	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 144 5720MHz		5407.33	50.14	-23.86	74	39.56	31.6	9.11	30.13	213	341	P	H
		5470	50.54	-17.66	68.2	39.86	31.7	9.12	30.14	213	341	P	H
		5458.03	41.05	-12.95	54	30.37	31.7	9.12	30.14	213	341	A	H
	*	5720	102.75	-	-	91.71	31.93	9.37	30.26	213	341	P	H
	*	5720	95.28	-	-	84.24	31.93	9.37	30.26	213	341	A	H
		5872.25	51.6	-16.6	68.2	40.07	32.27	9.6	30.34	213	341	P	H
		5365.6	49.84	-24.16	74	39.46	31.47	9.03	30.12	255	349	P	V
		5463.49	48.93	-19.27	68.2	38.25	31.7	9.12	30.14	255	349	P	V
		5454.13	41.05	-12.95	54	30.37	31.7	9.12	30.14	255	349	A	V
	*	5720	102.42	-	-	91.38	31.93	9.37	30.26	255	349	P	V
	*	5720	93.76	-	-	82.72	31.93	9.37	30.26	255	349	A	V
		5866	51.71	-16.49	68.2	40.22	32.23	9.6	30.34	255	349	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak (P/A)	Pol. (H/V)
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2				( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a CH 144 5720MHz		11440	46.35	-27.65	74	53.46	40.07	13.94	61.12	100	0	P	H
		17160	49.43	-18.77	68.2	50.71	40.57	17.76	59.61	100	0	P	H
		11440	45.72	-28.28	74	52.83	40.07	13.94	61.12	100	0	P	V
		17160	48.39	-19.81	68.2	49.67	40.57	17.76	59.61	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Band 3 - Straddle Channel

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 142 5710MHz		5454.52	50.41	-23.59	74	39.73	31.7	9.12	30.14	216	341	P	H
		5461.15	49.4	-18.8	68.2	38.72	31.7	9.12	30.14	216	341	P	H
		5450.62	41.71	-12.29	54	31.03	31.7	9.12	30.14	216	341	A	H
	*	5710	97.99	-	-	87.03	31.87	9.35	30.26	216	341	P	H
	*	5710	90.43	-	-	79.47	31.87	9.35	30.26	216	341	A	H
		5902.25	52.14	-16.06	68.2	40.56	32.3	9.64	30.36	216	341	P	H
		5412.01	50.85	-23.15	74	40.24	31.63	9.11	30.13	258	358	P	V
		5468.17	50.24	-17.96	68.2	39.56	31.7	9.12	30.14	258	358	P	V
		5454.91	41.64	-12.36	54	30.96	31.7	9.12	30.14	258	358	A	V
	*	5710	95.64	-	-	84.68	31.87	9.35	30.26	258	358	P	V
	*	5710	87.94	-	-	76.98	31.87	9.35	30.26	258	358	A	V
		5947.75	51.9	-16.3	68.2	40.19	32.4	9.69	30.38	258	358	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

## Band 3 - Straddle Channel

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

WIFI	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak (P/A)	Pol. (H/V)	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
1+2				( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)	
802.11n HT40 CH 142 5710MHz		11420	45.25	-28.75	74	52.42	40.03	13.96	61.16	100	0	P	H	
		17130	47.99	-20.21	68.2	49.39	40.53	17.71	59.64	100	0	P	H	
		11420	45.74	-28.26	74	52.91	40.03	13.96	61.16	100	0	P	V	
		17130	47.78	-20.42	68.2	49.18	40.53	17.71	59.64	100	0	P	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



## Band 3 - Straddle Channel

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 138 5690MHz		5412.79	50.66	-23.34	74	40.05	31.63	9.11	30.13	209	341	P	H
		5466.61	49.18	-19.02	68.2	38.5	31.7	9.12	30.14	209	341	P	H
		5395.24	41.57	-12.43	54	31	31.6	9.1	30.13	209	341	A	H
	*	5690	94.43	-	-	83.56	31.8	9.32	30.25	209	341	P	H
	*	5690	87.07	-	-	76.2	31.8	9.32	30.25	209	341	A	H
		5892.1	51.94	-16.26	68.2	40.37	32.3	9.63	30.36	209	341	P	H
		5371.45	49.82	-24.18	74	39.42	31.47	9.05	30.12	261	346	P	V
		5470	50.25	-17.95	68.2	39.57	31.7	9.12	30.14	261	346	P	V
		5457.64	41.67	-12.33	54	30.99	31.7	9.12	30.14	261	346	A	V
	*	5690	92.01	-	-	81.14	31.8	9.32	30.25	261	346	P	V
	*	5690	84.35	-	-	73.48	31.8	9.32	30.25	261	346	A	V
		5942.5	51.62	-16.58	68.2	39.92	32.4	9.68	30.38	261	346	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

## Band 3 - Straddle Channel

## WIFI 802.11ac VHT80 (Harmonic @ 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 )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac VHT80 CH 138 5690MHz		11380	45.02	-28.98	74	52.3	39.97	13.99	61.24	100	0	P	H
		17070	47.88	-20.32	68.2	49.48	40.5	17.62	59.72	100	0	P	H
		11380	44.35	-29.65	74	51.63	39.97	13.99	61.24	100	0	P	V
		17070	47.81	-20.39	68.2	49.41	40.5	17.62	59.72	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## Emission below 1GHz

## WIFI 802.11ac VHT80 (LF @ 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 )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac VHT80 LF		70.5	27.38	-12.62	40	46.44	12.44	1.02	32.6	-	-	P	H
		104.52	28.86	-14.64	43.5	43.65	16.46	1.24	32.57	-	-	P	H
		201.99	28.08	-15.42	43.5	43.6	15.14	1.71	32.54	-	-	P	H
		486.9	27.11	-18.89	46	32.97	23.99	2.6	32.55	-	-	P	H
		810.3	30.53	-15.47	46	30.97	28.18	3.36	32.17	-	-	P	H
		893.6	33.79	-12.21	46	32.49	29.31	3.51	31.73	100	0	P	H
													H
													H
													H
													H
													H
													H
													H
													V
		71.85	34.03	-5.97	40	52.94	12.58	1.03	32.6	100	0	P	V
		171.48	25.27	-18.23	43.5	40.4	15.65	1.57	32.55	-	-	P	V
		197.67	24.55	-18.95	43.5	40.25	14.97	1.69	32.54	-	-	P	V
		481.3	27.62	-18.38	46	33.58	23.9	2.59	32.55	-	-	P	V
		852.3	32	-14	46	31.07	29.25	3.45	31.95	-	-	P	V
		954.5	33.77	-12.23	46	30.03	31.08	3.65	31.24	-	-	P	V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 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 or Average</b>
H/V	<b>Horizontal or 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 )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		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(dB $\mu$ V/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dB $\mu$ V) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dB $\mu$ V/m) – Limit Line(dB $\mu$ V/m)

#### For Peak Limit @ 2390MHz:

1. Level(dB $\mu$ V/m)  
 $= \text{Antenna Factor(dB/m)} + \text{Path Loss(dB)} + \text{Read Level(dB $\mu$ V)} - \text{Preamp Factor(dB)}$   
 $= 32.22(\text{dB}/\text{m}) + 4.58(\text{dB}) + 54.51(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$   
 $= 55.45 (\text{dB}\mu\text{V}/\text{m})$
2. Over Limit(dB)  
 $= \text{Level(dB}\mu\text{V}/\text{m)} - \text{Limit Line(dB}\mu\text{V}/\text{m)}$   
 $= 55.45(\text{dB}\mu\text{V}/\text{m}) - 74(\text{dB}\mu\text{V}/\text{m})$   
 $= -18.55(\text{dB})$

#### For Average Limit @ 2390MHz:

1. Level(dB $\mu$ V/m)  
 $= \text{Antenna Factor(dB/m)} + \text{Path Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$   
 $= 32.22(\text{dB}/\text{m}) + 4.58(\text{dB}) + 42.6(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$   
 $= 43.54 (\text{dB}\mu\text{V}/\text{m})$
2. Over Limit(dB) = Level(dB $\mu$ V/m) – Limit Line(dB $\mu$ V/m)  
 $= 43.54(\text{dB}\mu\text{V}/\text{m}) - 54(\text{dB}\mu\text{V}/\text{m})$   
 $= -10.46(\text{dB})$

**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 Bigshow Wang	<b>Temperature :</b>	24~26°C
		<b>Relative Humidity :</b>	50~55%

### Note symbol

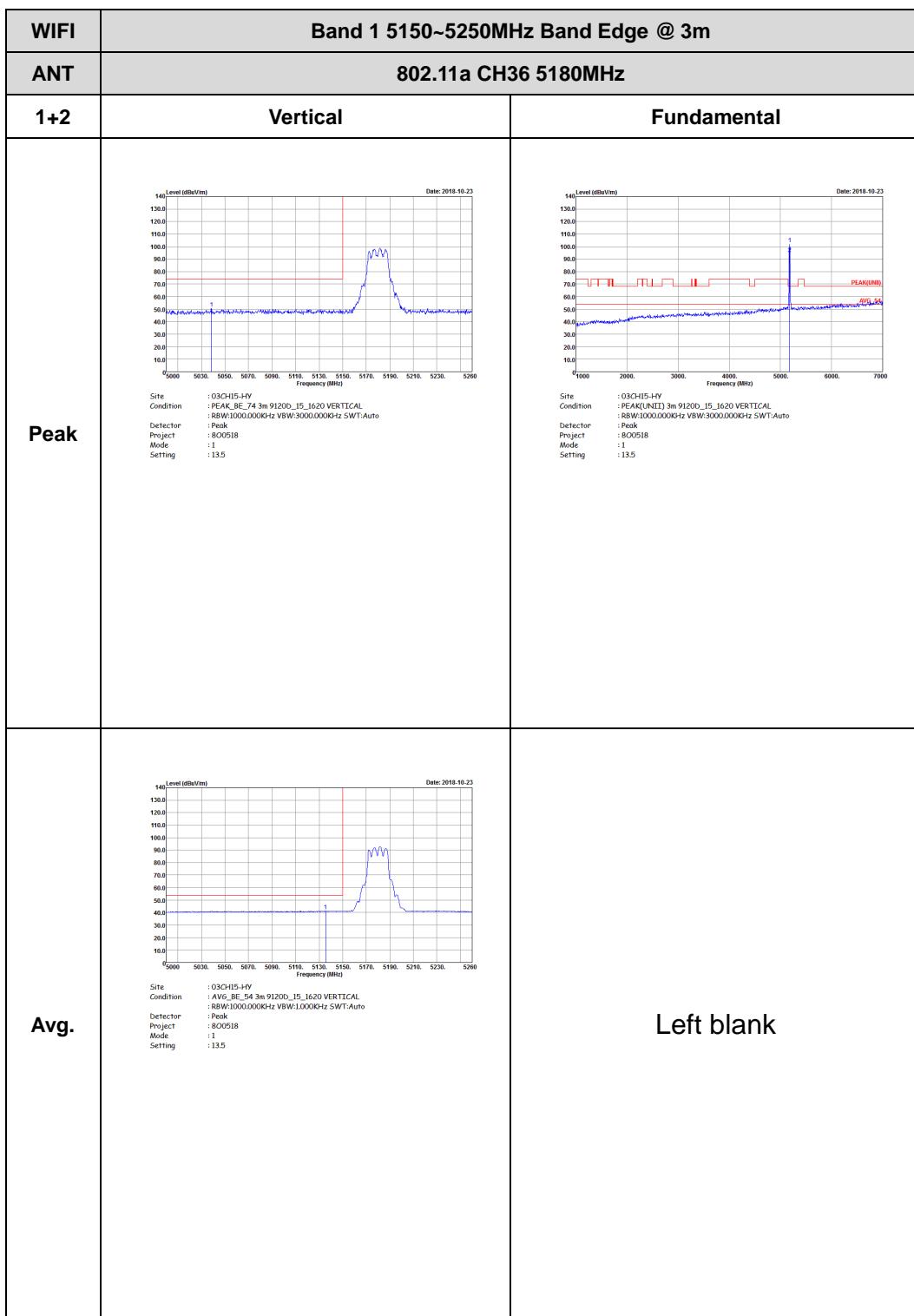
-L	<b>Low channel location</b>
-R	<b>High channel location</b>

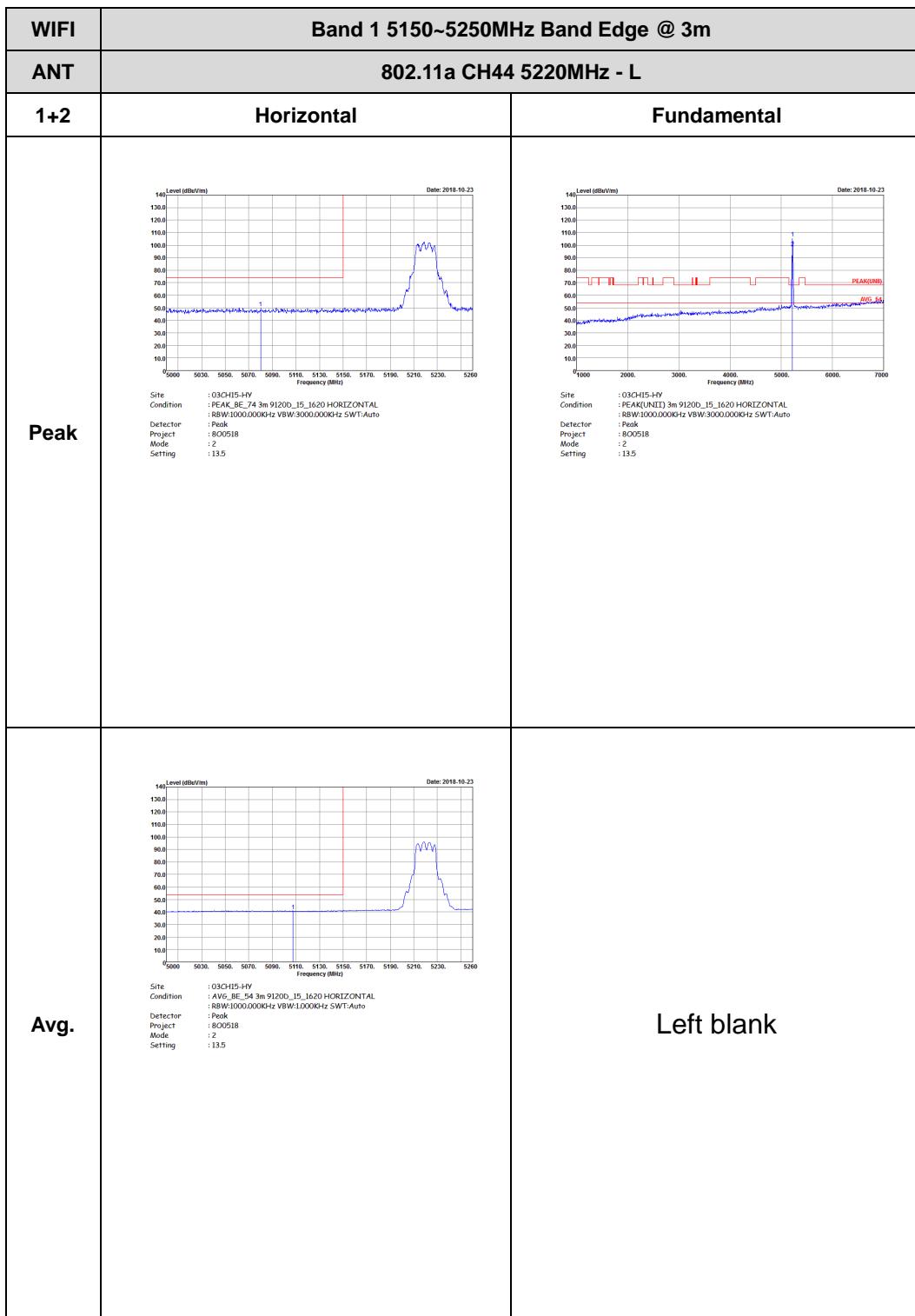


## Band 1 - 5150~5250MHz

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

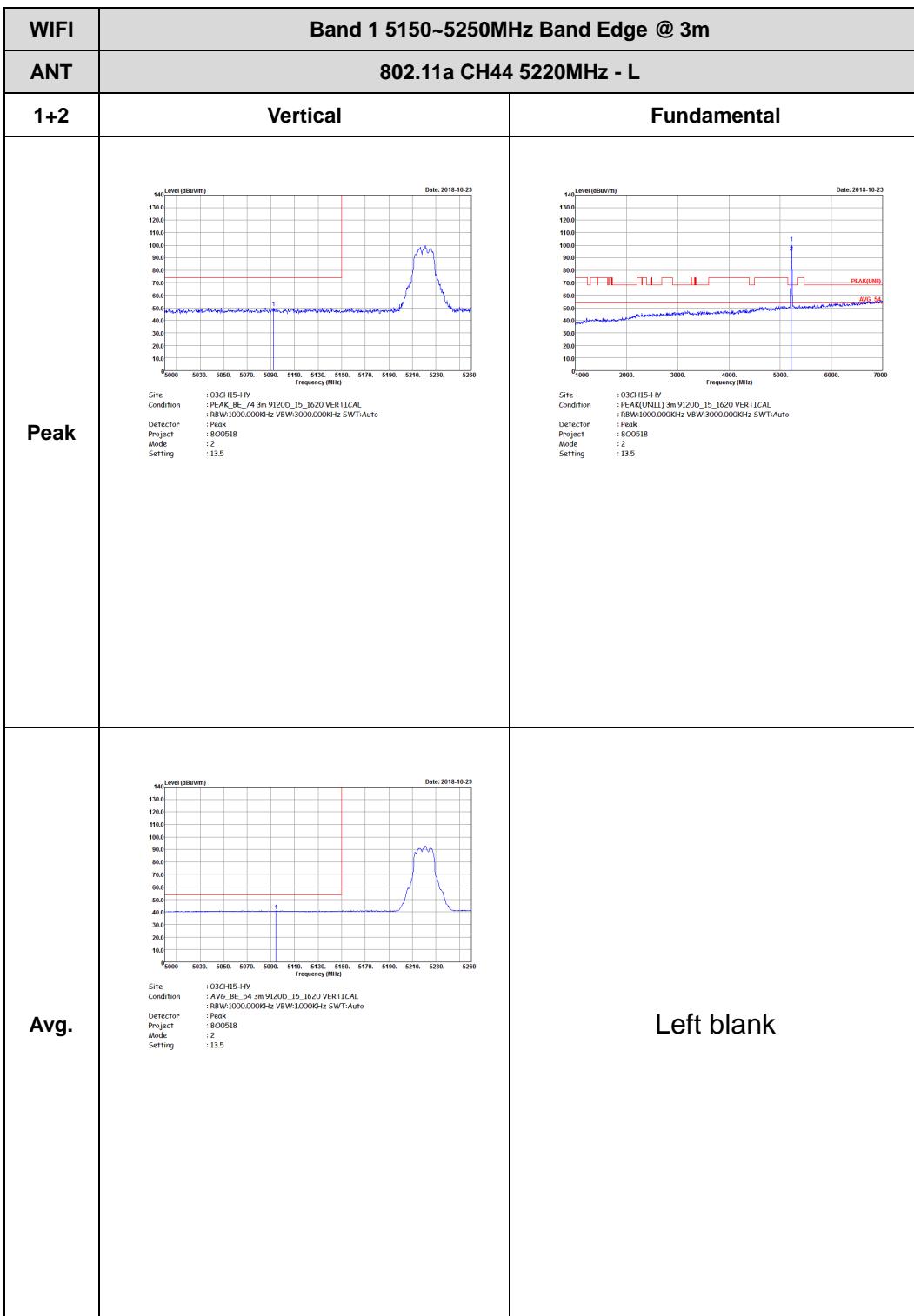
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03C115-HY Condition : PEAK_BE_74_3m_91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 1 Setting : 13.5	 Site : 03C115-HY Condition : PEAK(UNIT) 3m 91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 1 Setting : 13.5
Avg.	 Site : 03C115-HY Condition : AVG_BE_54_3m_91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:1.000Hz SWT:Auto Project : 800518 Mode : 1 Setting : 13.5	Left blank





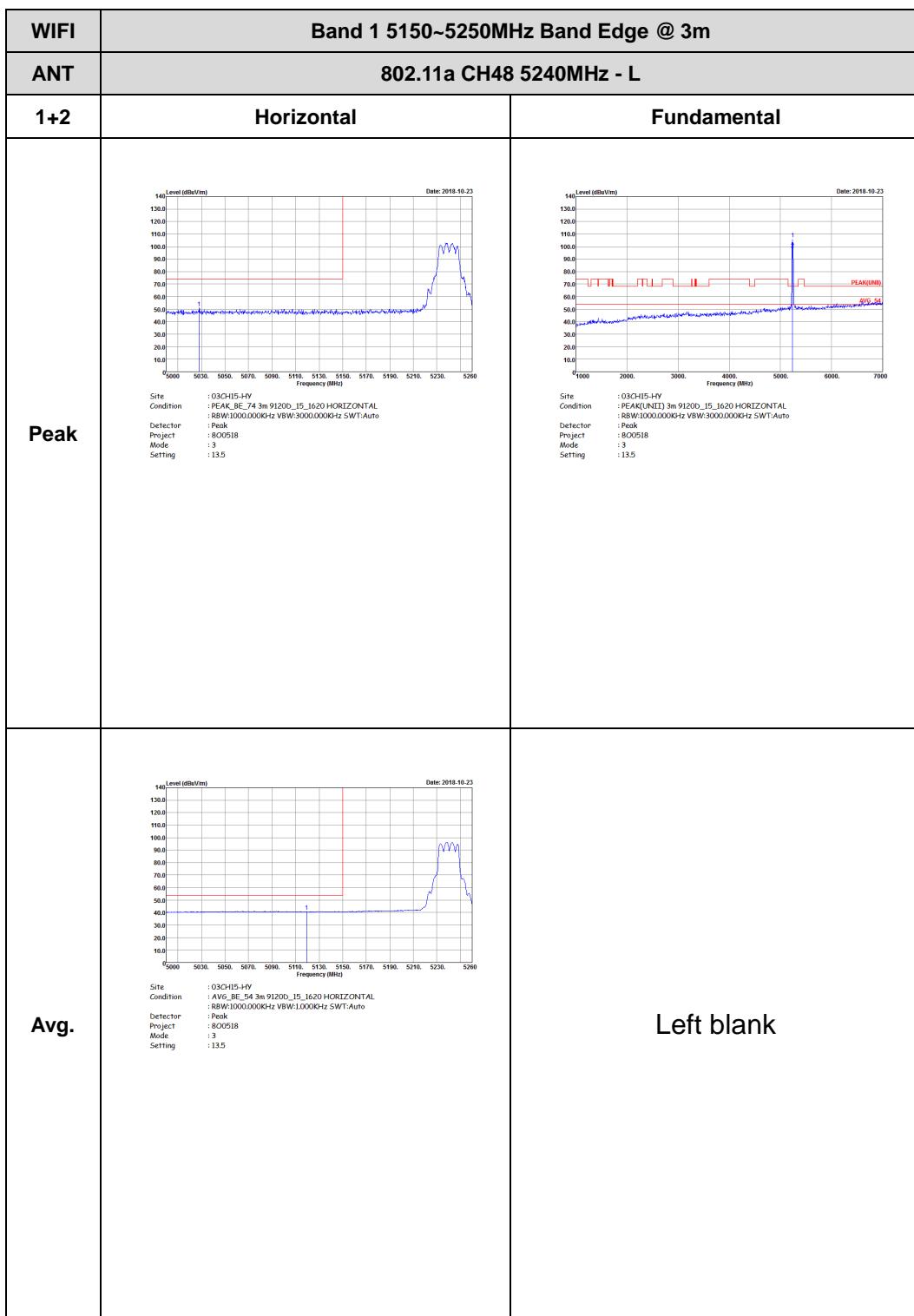


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : Peak Setting : 2 Setting : 13.5</p>	Left blank
Avg.	<p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Project : 800518 Mode : Peak Setting : 2 Setting : 13.5</p>	Left blank





WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak	<p>Level (dBm/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HV Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : 2 Setting : 13.5</p>	Left blank
Avg.	<p>Level (dBm/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HV Condition : AVG_BE_54 3m 91200_I5_1620 VERTICAL Detector : R8W1000.000KHz VBW:1.000KHz SWT:Auto Project : 800518 Mode : 2 Setting : 13.5</p>	Left blank





WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1+2	Horizontal	Fundamental
Peak	 Date: 2018-10-23 Site : 03CH15-HY Condition : PC4K_BE_74 3m 91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : 3 Setting : 13.5	Left blank
Avg.	 Date: 2018-10-23 Site : AVG_BE_54 3m 91200_I5_1620_HORIZONTAL Condition : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 3 Setting : 13.5	Left blank

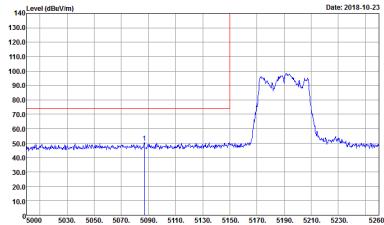
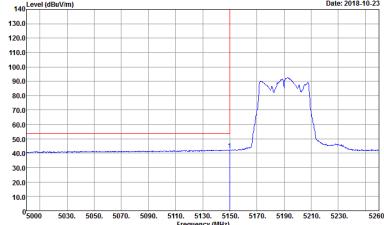




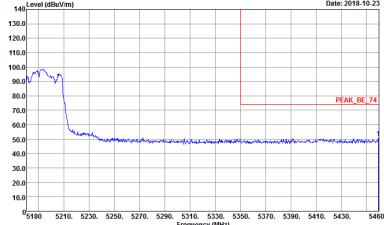
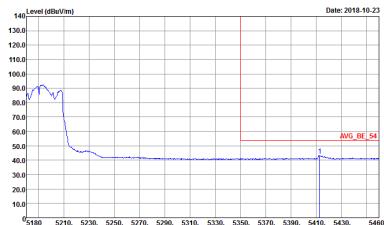
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1+2	Vertical	Fundamental
Peak	<p>Level (dBm/V/m) vs Frequency (MHz) from 5180 to 5460. The plot shows a single sharp peak labeled 'PEAK_BE_74' at approximately 5240 MHz. The y-axis ranges from 10.0 to 140.0 dBm/V/m. The x-axis ranges from 5180 to 5460 MHz. Test parameters: Site: 03CH15-HV, Condition: PCMK_BE_74 3m 91200_I5_1620 VERTICAL, Detector: R8W1000.000KHz VBW:3000.000KHz SWT:Auto, Project: 800518, Mode: 3, Setting: 13.5.</p>	Left blank
Avg.	<p>Level (dBm/V/m) vs Frequency (MHz) from 5180 to 5460. The plot shows a broad peak labeled 'AVG_BE_54' at approximately 5240 MHz. The y-axis ranges from 10.0 to 140.0 dBm/V/m. The x-axis ranges from 5180 to 5460 MHz. Test parameters: Site: 03CH15-HV, Condition: AVG_BE_54 3m 91200_I5_1620 VERTICAL, Detector: R8W1000.000KHz VBW:1.000KHz SWT:Auto, Project: 800518, Mode: 3, Setting: 13.5.</p>	Left blank



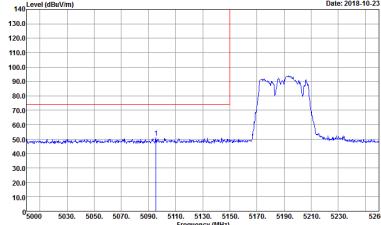
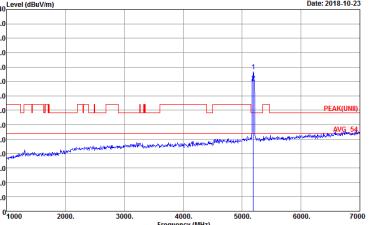
**Band 1 5150~5250MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23</p> <p>Site: 03CH15-HY Condition: PC:BE_7/4 3m 91200_I5_1620 HORIZONTAL Detector: R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project: 800518 Mode: 7 Setting: 11.5</p>	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23</p> <p>Site: 03CH15-HY Condition: PC:BE_7/4 3m 91200_I5_1620 HORIZONTAL Detector: R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project: 800518 Mode: 7 Setting: 11.5</p>
Avg.	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23</p> <p>Site: 03CH15-HY Condition: AVG_BE_54 3m 91200_I5_1620 HORIZONTAL Detector: Peak Project: 800518 Mode: 7 Setting: 11.5</p>	Left blank

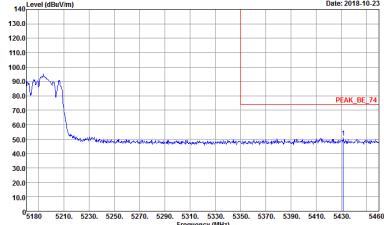
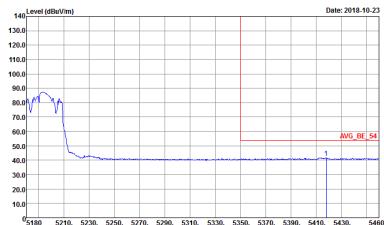


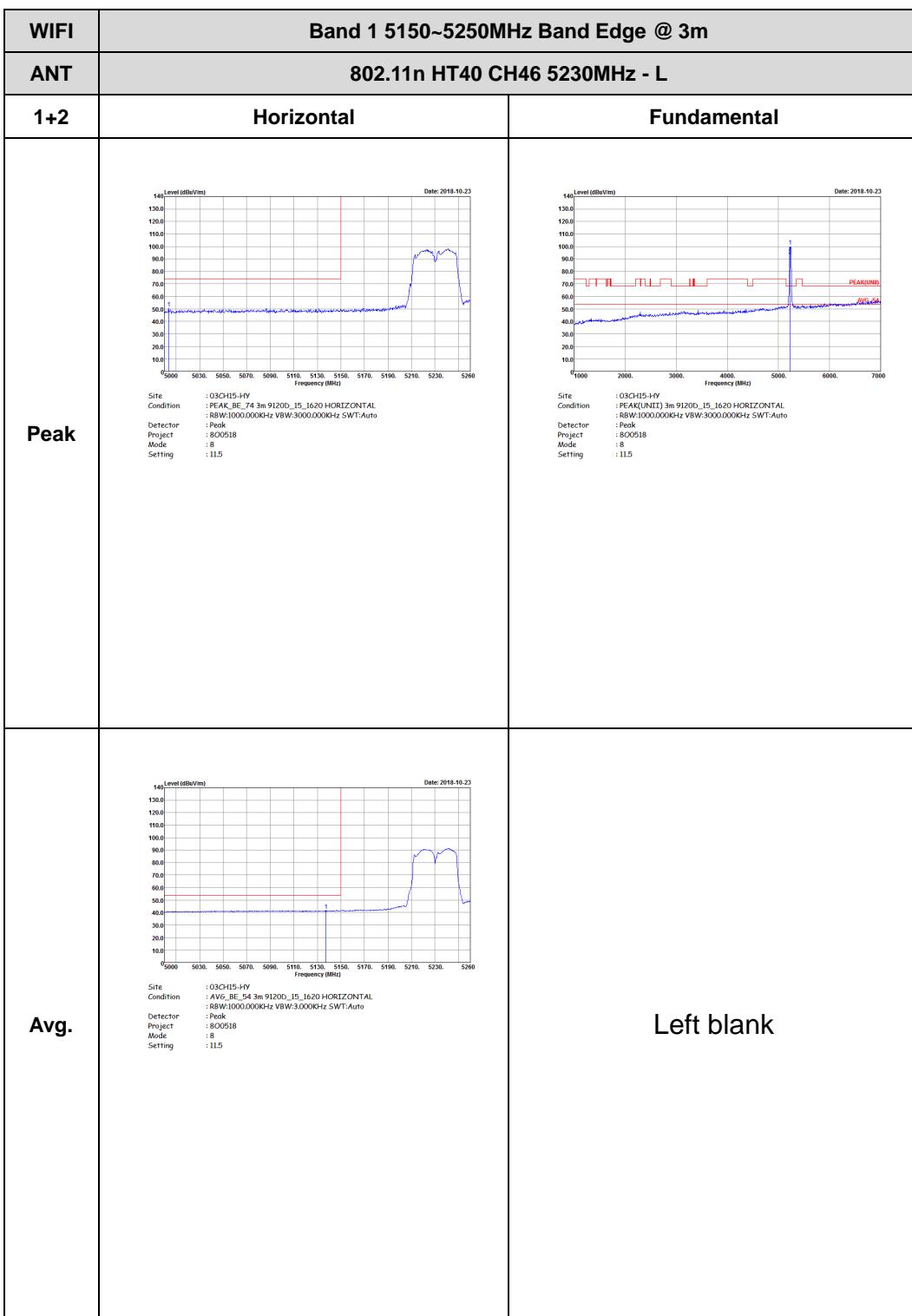
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 7 Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : AVG_BE_54 3m 91200_I5_1620 HORIZONTAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 7 Setting : 11.5</p>	Left blank



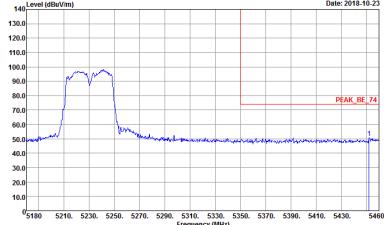
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PCAKC_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 7 Setting : 11.5	 Site : 03CH15-HY Condition : PCAKC(BE)I 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : 7 Setting : 11.5
Avg.	 Site : AVG_BE_54 3m 91200_I5_1620 VERTICAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 7 Setting : 11.5	Left blank



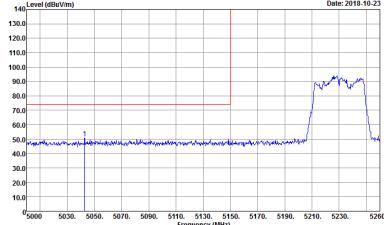
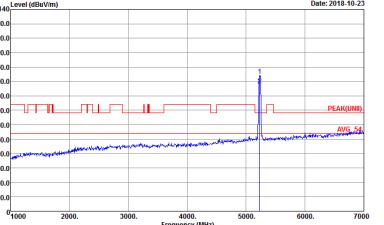
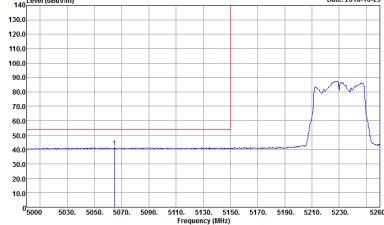
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1+2	Vertical	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : Peak Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : Peak Setting : 11.5</p>	Left blank



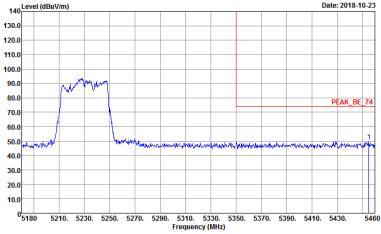
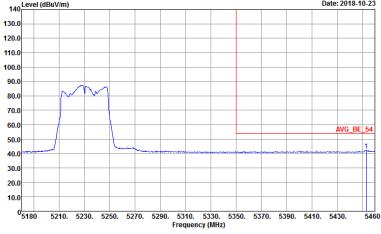


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 9120D_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : B Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : AVG_BE_54 3m 9120D_15_1620 HORIZONTAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : B Setting : 11.5</p>	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
1+2	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 8 Setting : 11.5</p>	 <p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 8 Setting : 11.5</p>
Avg.	 <p>Site : AVG_BE_54 3m 91200_I5_1620 VERTICAL Condition : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 8 Setting : 11.5</p>	Left blank

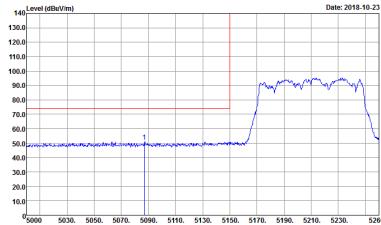
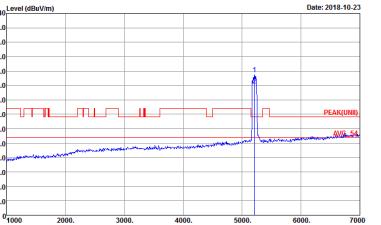
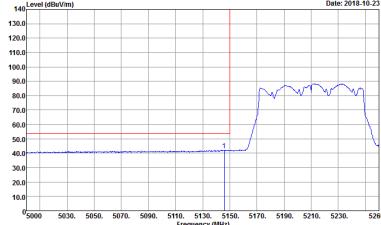


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1+2	Vertical	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : PCMC_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 8 Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : AVG_BE_54 3m 91200_I5_1620 VERTICAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 8 Setting : 11.5</p>	Left blank

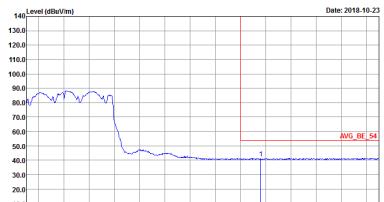


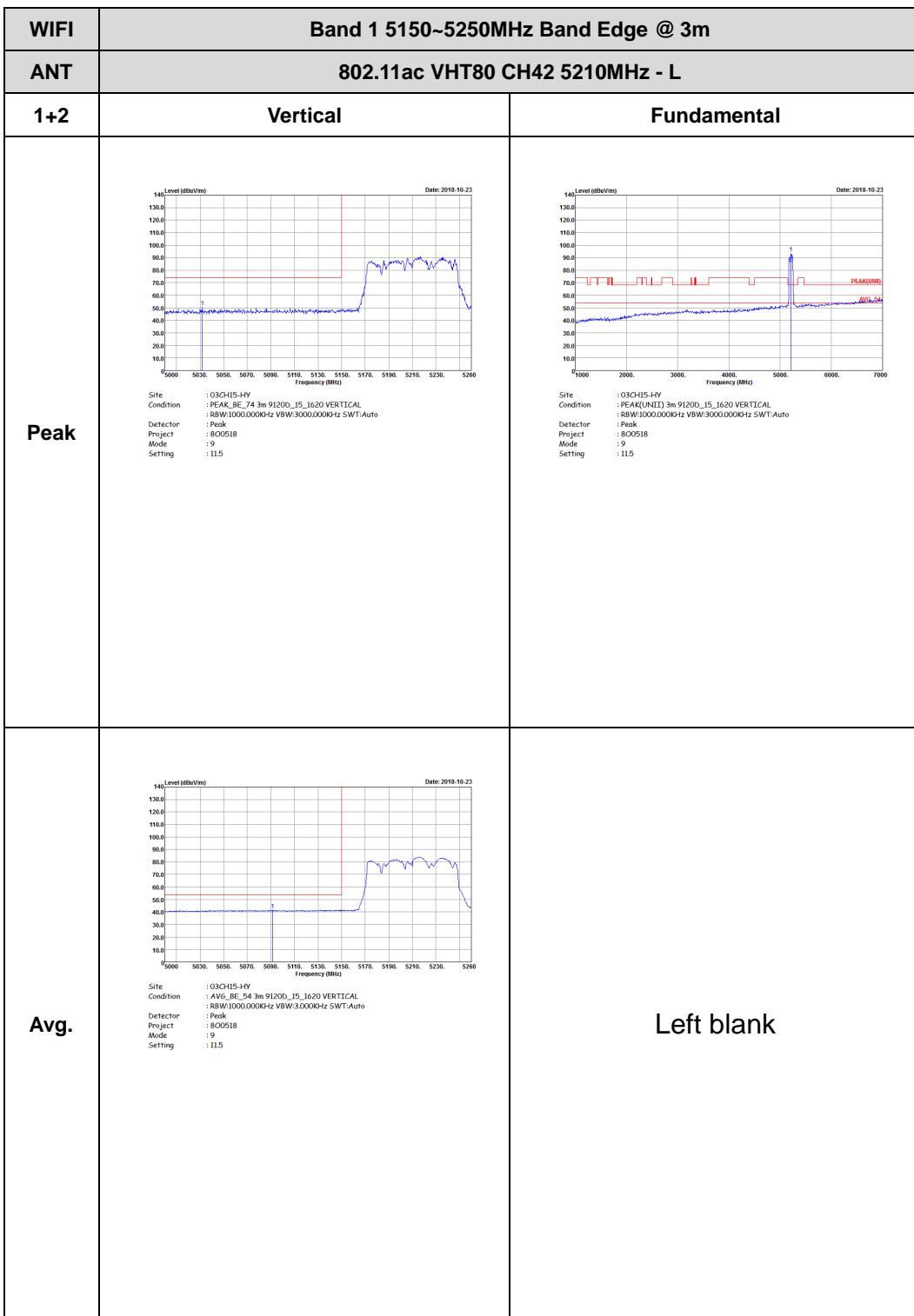
## Band 1 5150~5250MHz

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

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PC:BE_7/4 3m 9120D_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 9 Setting : 11.5	 Site : 03CH15-HY Condition : PC:BE_7/4 3m 9120D_15_1620 HORIZONTAL Detector : Peak Project : 800518 Mode : 9 Setting : 11.5
Avg.	 Site : AVG_BE_54 3m 9120D_15_1620 HORIZONTAL Condition : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 9 Setting : 11.5	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 9 Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 9 Setting : 11.5</p>	Left blank



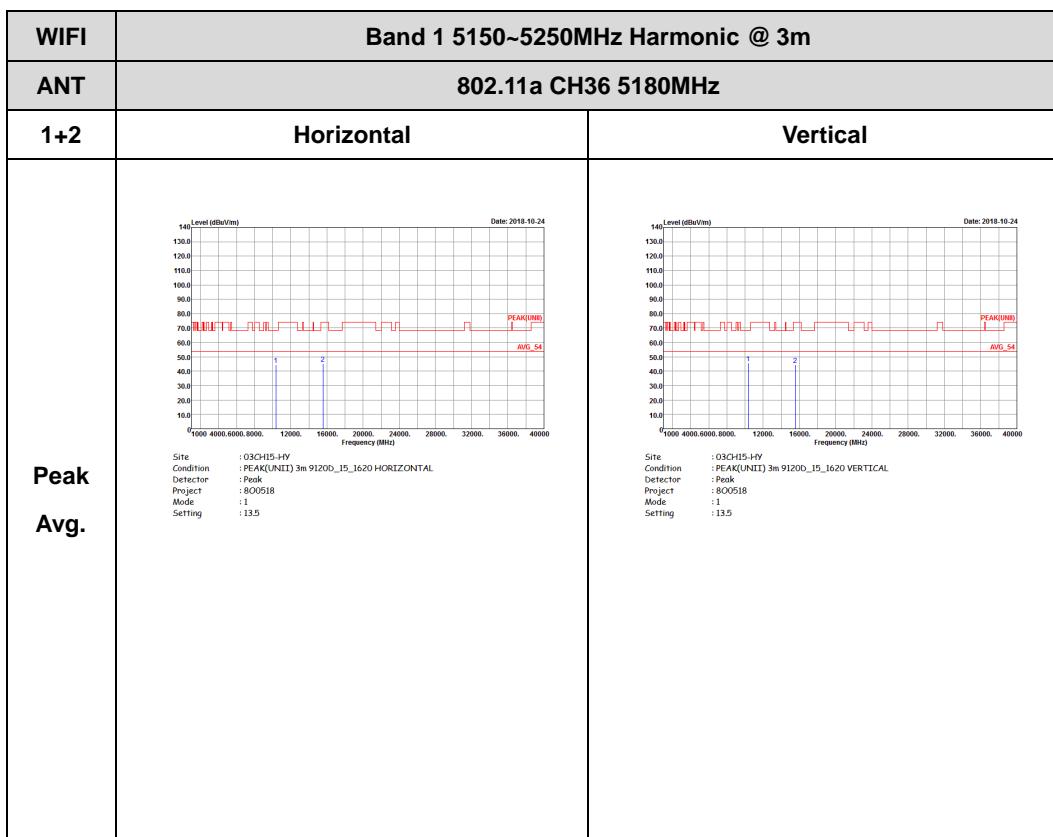


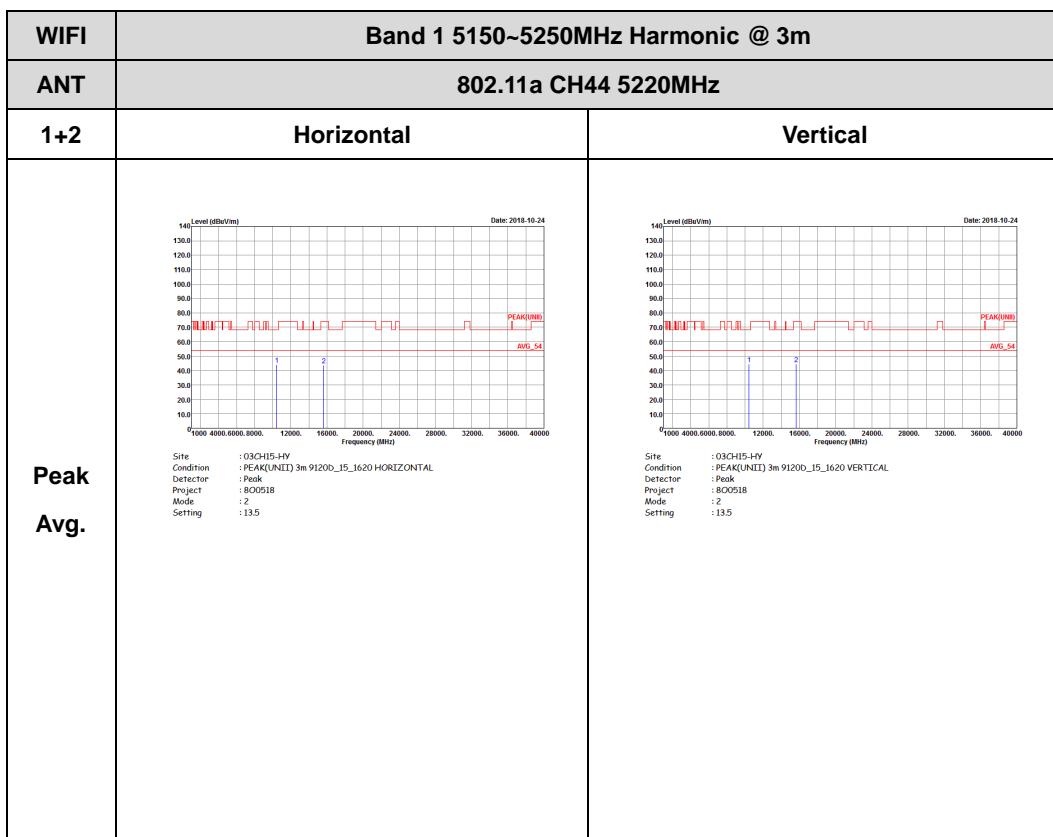
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1+2	Vertical	Fundamental
Peak	 Date: 2018-10-23 Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 9 Setting : 11.5	Left blank
Avg.	 Date: 2018-10-23 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_I5_1620 VERTICAL Detector : Peak Project : 800518 Mode : 9 Setting : 11.5	Left blank

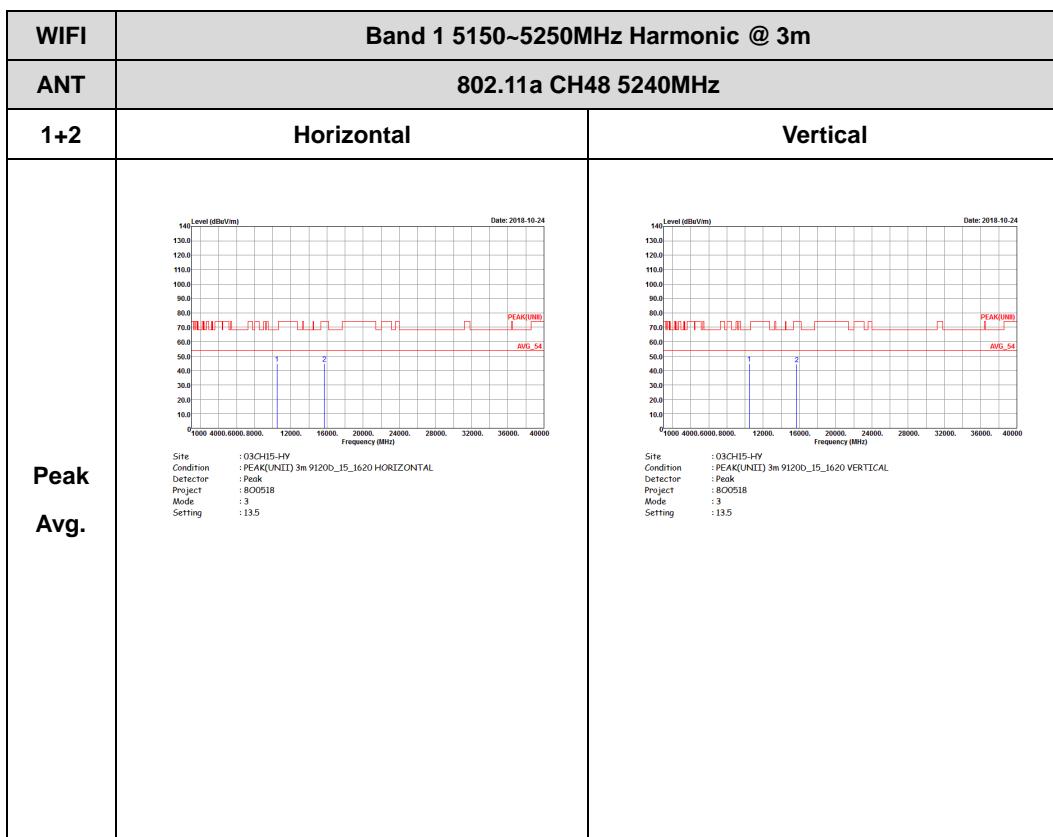


## Band 1 - 5150~5250MHz

## WIFI 802.11a (Harmonic @ 3m)

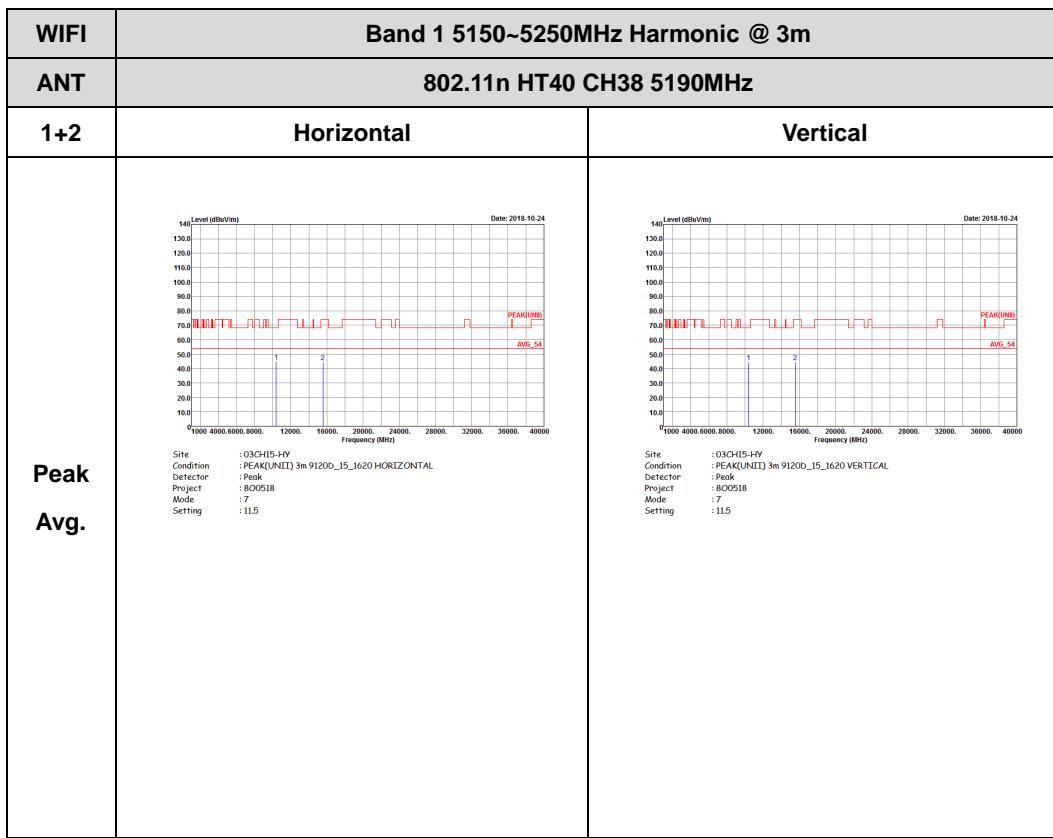


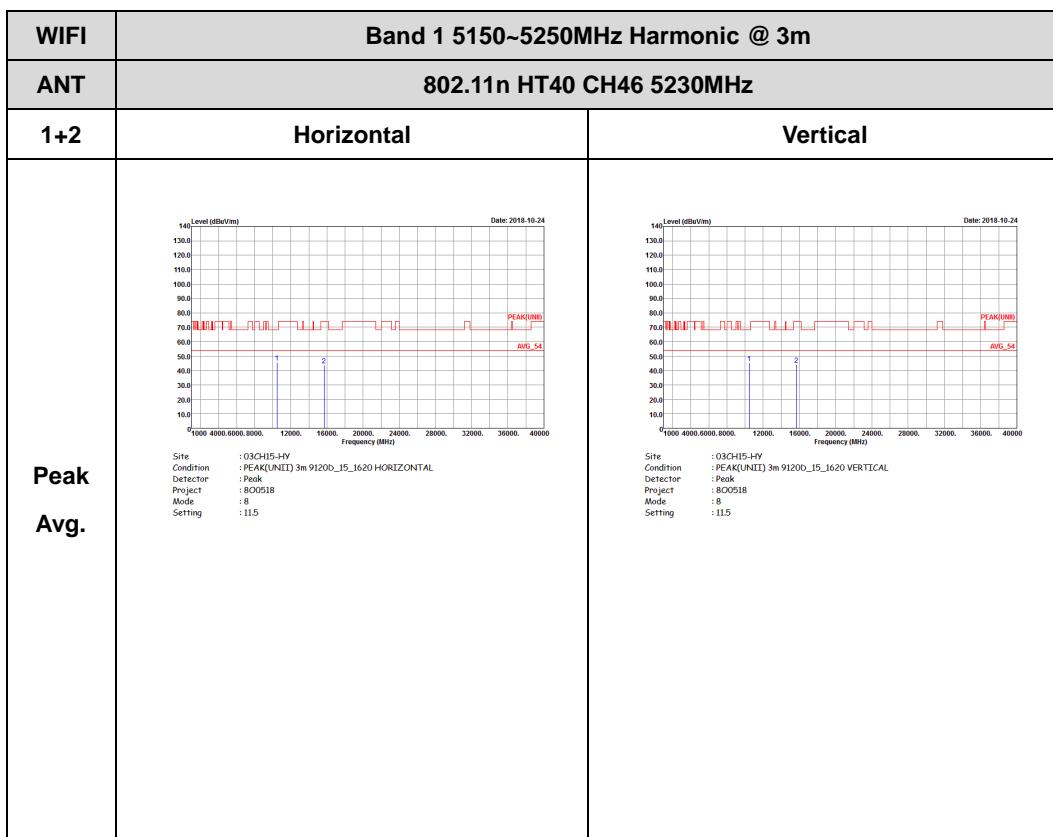






**Band 1 5150~5250MHz**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

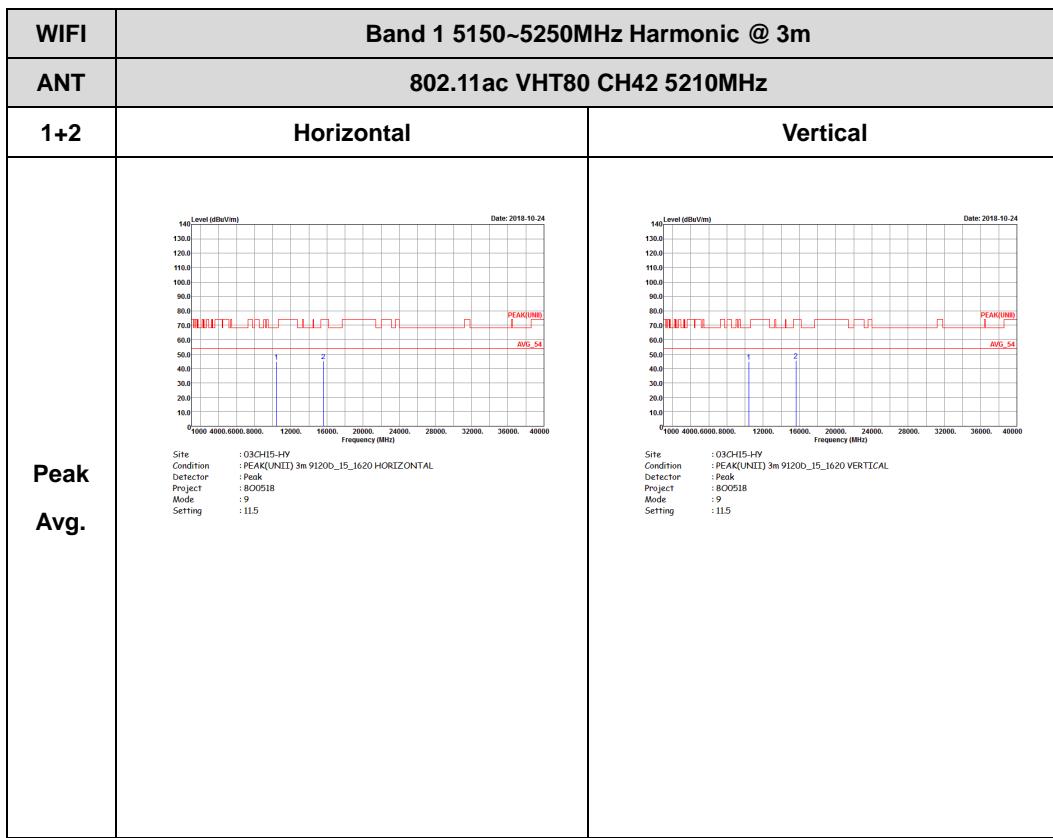






## Band 1 5150~5250MHz

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





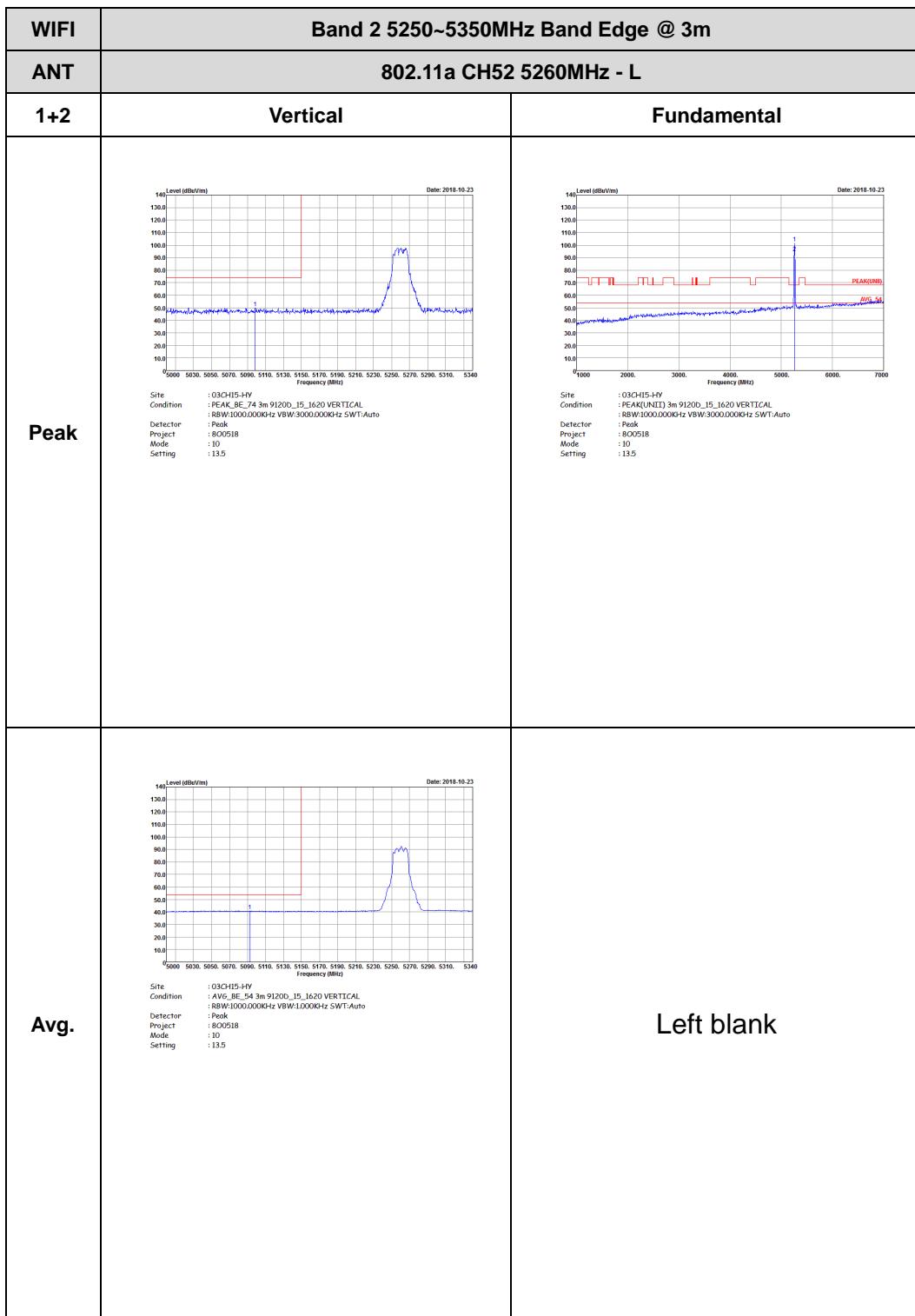
## Band 2 - 5250~5350MHz

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

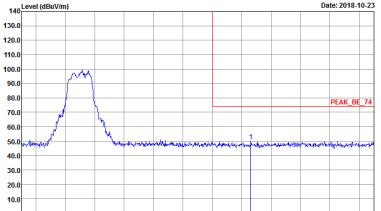
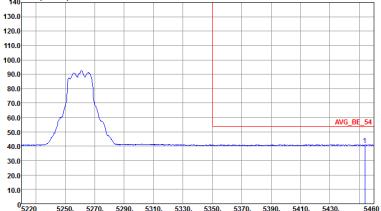
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH52 5260MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74_3m_91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 10 Setting : 13.5	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 10 Setting : 13.5
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54_3m_91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:1.000Hz SWT:Auto Project : 800518 Mode : 10 Setting : 13.5	Left blank

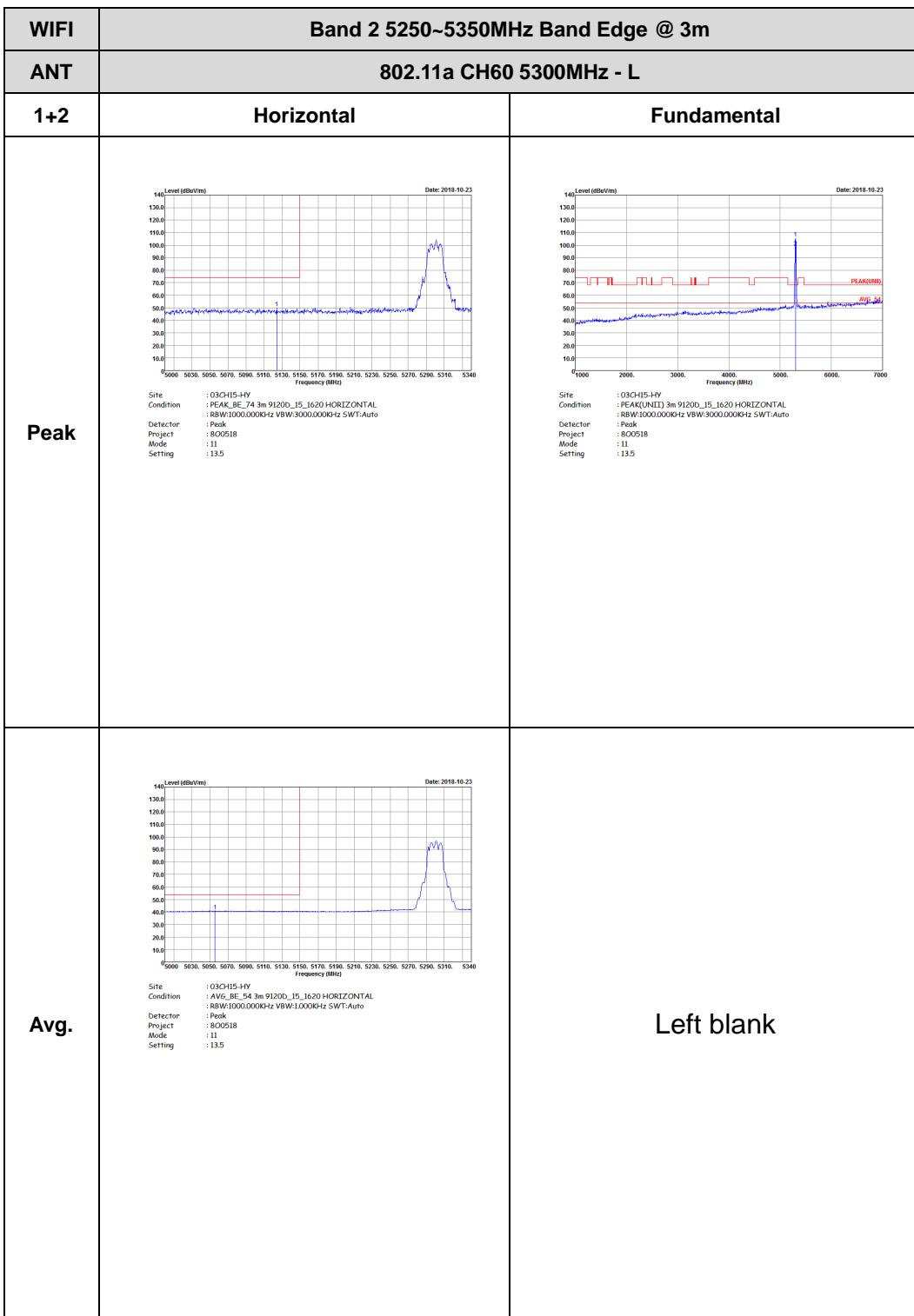


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH52 5260MHz - R	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : IO Setting : 13.5</p>	Left blank
Avg.	<p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Project : 800518 Mode : IO Setting : 13.5</p>	Left blank





WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH52 5260MHz - R	
1+2	Vertical	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : IO Setting : 13.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Site : AVG_BE_54 3m 91200_I5_1620 VERTICAL Condition : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : IO Setting : 13.5</p>	Left blank





WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH60 5300MHz - R	
1+2	Horizontal	Fundamental
Peak	 Date: 2018-10-23 Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : II Setting : 13.5	Left blank
Avg.	 Date: 2018-10-23 Site : AVG_BE_54 3m 91200_I5_1620 HORIZONTAL Condition : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : II Setting : 13.5	Left blank



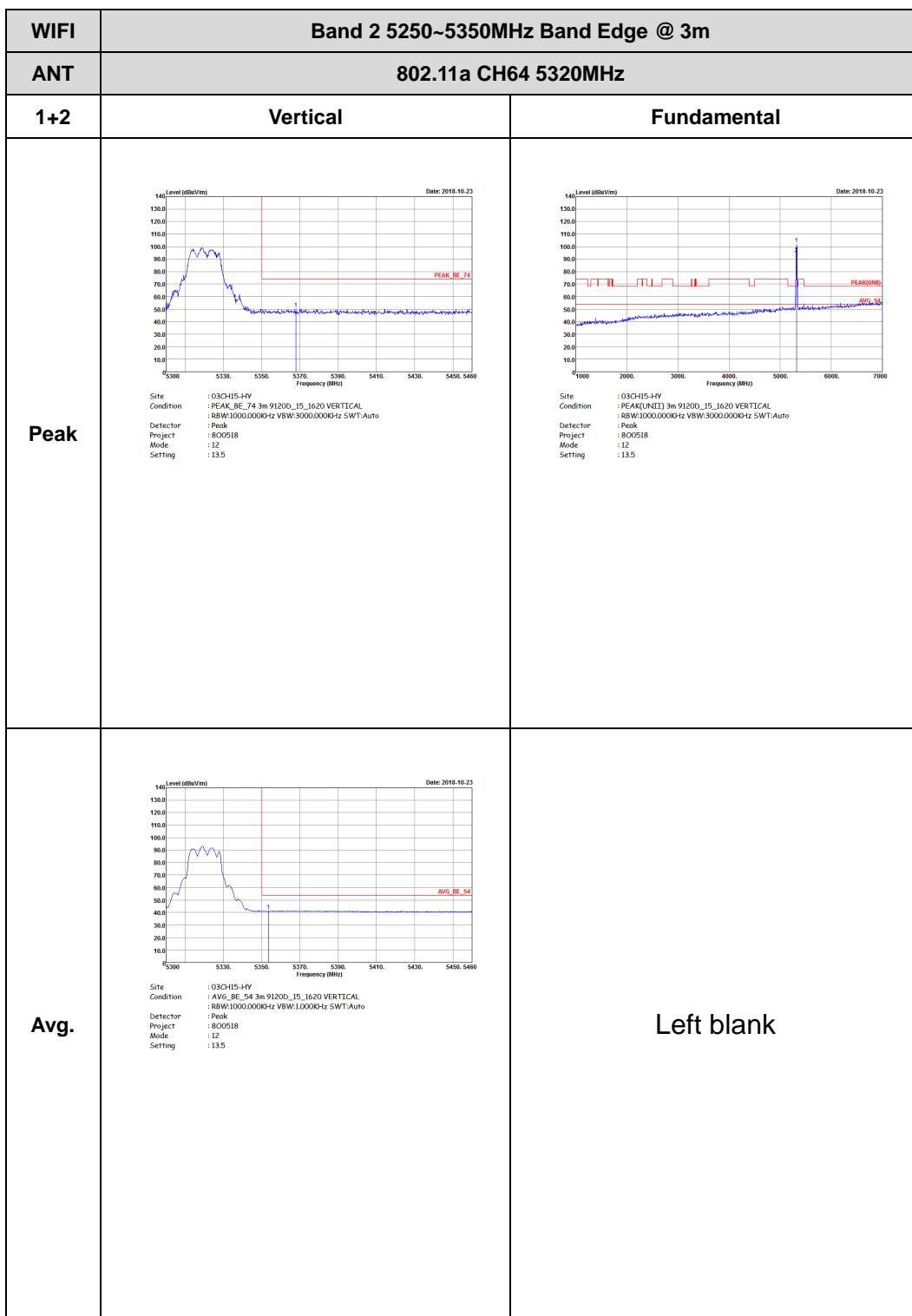
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH60 5300MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PCAK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : II Setting : 13.5	 Site : 03CH15-HY Condition : PCAK(BE)I 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : II Setting : 13.5
Avg.	 Site : AVG_BE_54 3m 91200_I5_1620 VERTICAL Condition : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : II Setting : 13.5	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH60 5300MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : II Setting : 13.5	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_I5_1620 VERTICAL Detector : R8W1000.000KHz VBW:1.000KHz SWT:Auto Project : 800518 Mode : II Setting : 13.5	Left blank

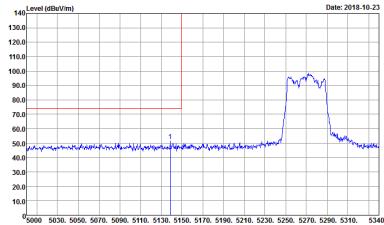
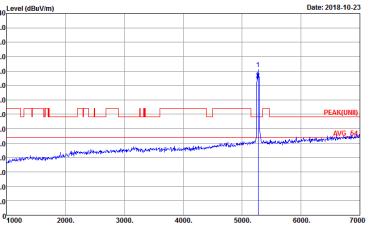
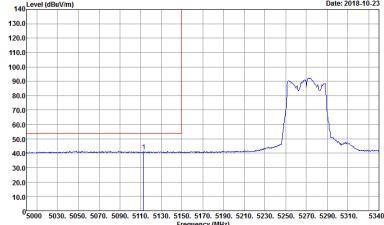


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PCAKC_BE_74 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : 12 Setting : 13.5	 Site : 03CH15-HY Condition : PCAKC_BE_74 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 800518 Mode : 12 Setting : 13.5
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Project : 800518 Mode : 12 Setting : 13.5	Left blank

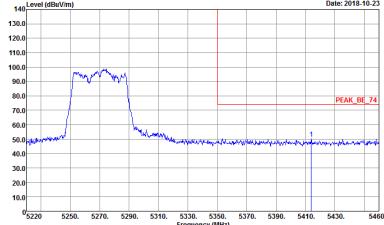


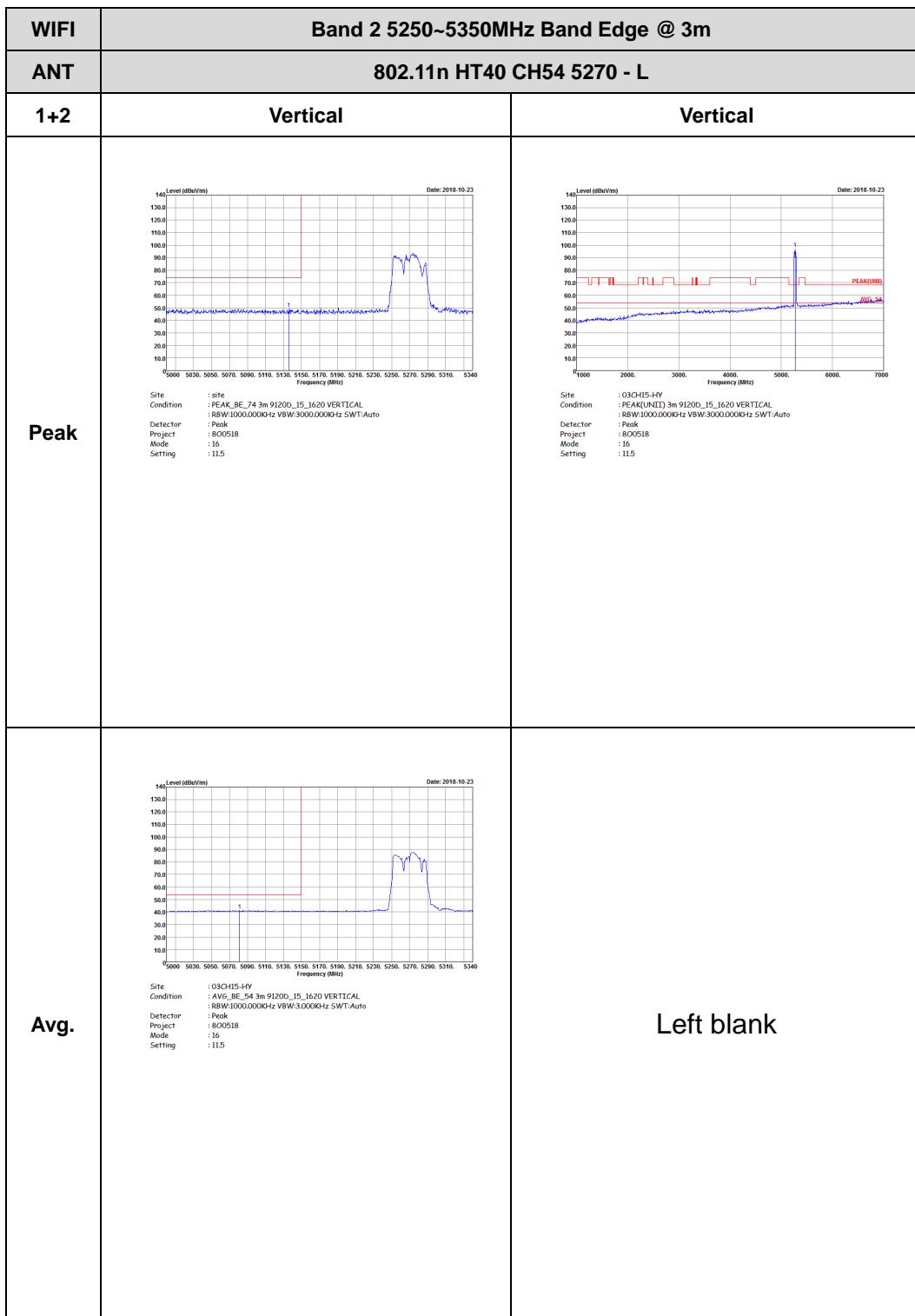


**Band 2 5250~5350MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

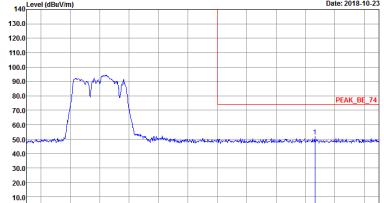
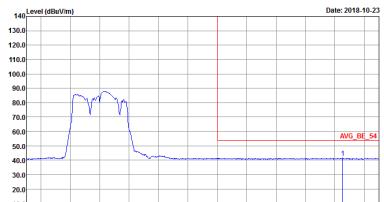
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH54 5270 - L	
1+2	Horizontal	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 16 Setting : 11.5</p>	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 16 Setting : 11.5</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 HORIZONTAL Detector : Peak Project : 800518 Mode : 16 Setting : 11.5</p>	Left blank



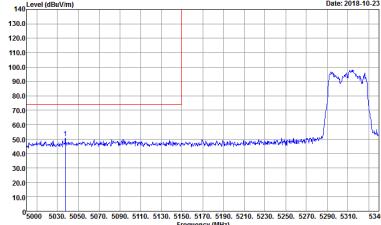
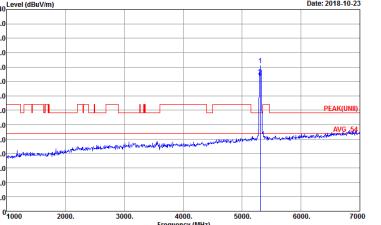
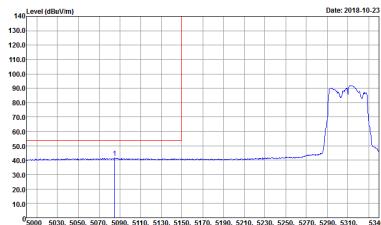
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH54 5270 - R	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : FCC_BE_74 3m 91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : I6 Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : AVG_BE_54 3m 91200_I5_1620_HORIZONTAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : I6 Setting : 11.5</p>	Left blank



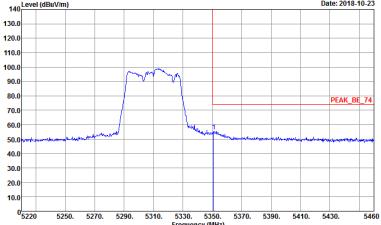
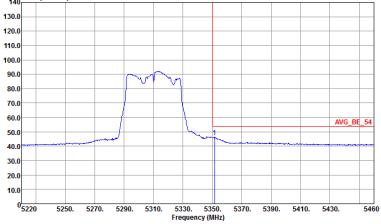


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH54 5270 - R	
1+2	Vertical	Vertical
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : I6 Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : I6 Setting : 11.5</p>	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PCAKC_BE_74 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : Peak Setting : 11.5	 Site : 03CH15-HY Condition : PCAKC(BNII) 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : Peak Setting : 11.5
Avg.	 Site : AVG_BE_54 3m 91200_15_1620 HORIZONTAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 17 Setting : 11.5	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - R	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBmV/m) Date: 2018-10-23 Frequency (MHz) Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620_HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : Peak Mode : 800518 Setting : 17 Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m) Date: 2018-10-23 Frequency (MHz) Site : AVG_BE_54 3m 91200_I5_1620_HORIZONTAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 17 Setting : 11.5</p>	Left blank



## FCC RADIO TEST REPORT

Report No. : FR800518E

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PCAKC_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 17 Setting : 11.5	 Site : 03CH15-HY Condition : PCAKC(BNII) 3m 91200_I5_1620 VERTICAL Detector : Peak Project : 800518 Mode : 17 Setting : 11.5
Avg.	 Site : AVG_BE_54 3m 91200_I5_1620 VERTICAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 17 Setting : 11.5	Left blank

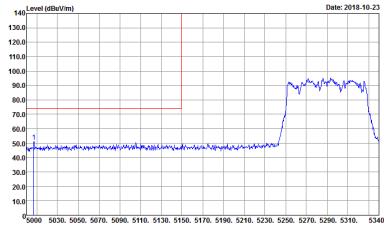
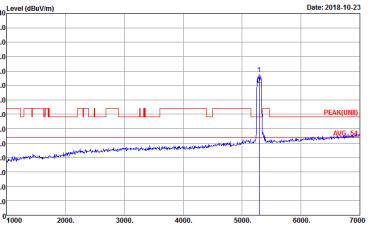
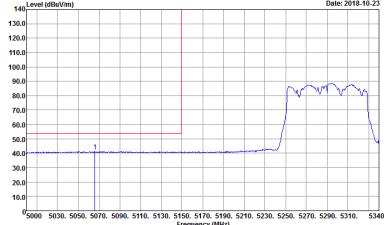


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 - R	
1+2	Vertical	Fundamental
Peak	 Date: 2018-10-23 Site : 03CH15-HV Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 17 Setting : 11.5	Left blank
Avg.	 Date: 2018-10-23 Site : AVG_BE_54 3m 91200_I5_1620 VERTICAL Condition : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 800518 Mode : 17 Setting : 11.5	Left blank



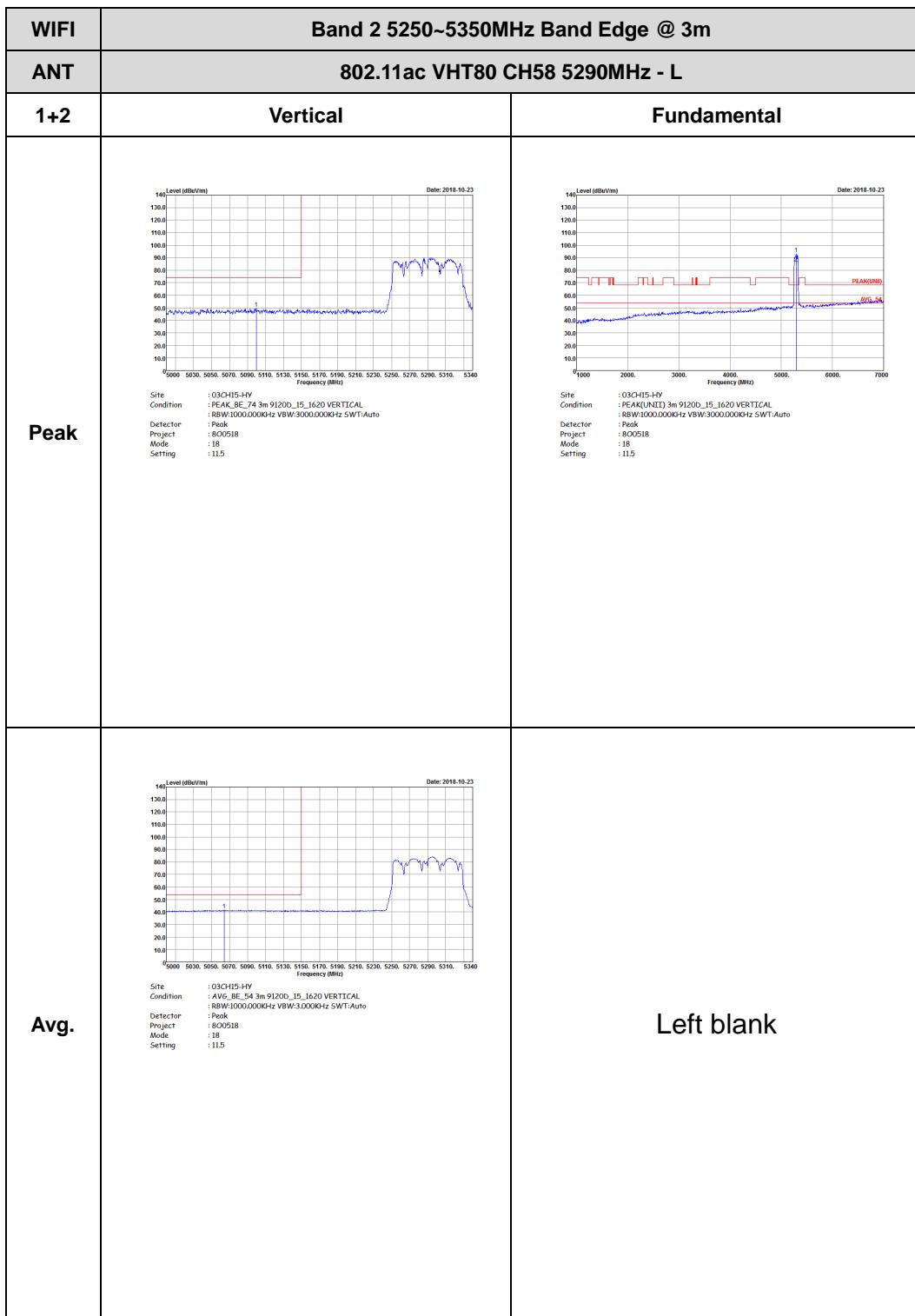
## Band 2 5250~5350MHz

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

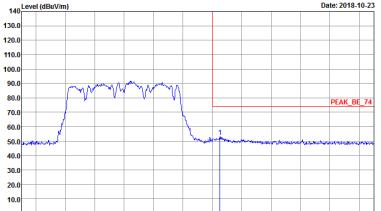
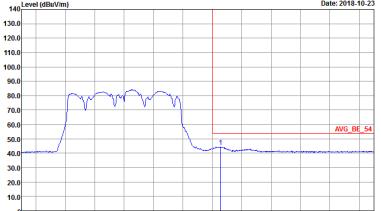
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23 Site: 03CH15-HY Condition: AVG_BE_54 3m 9120D_15_1620 HORIZONTAL Detector: R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project: 800518 Mode: 18 Setting: 11.5</p>	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23 Site: 03CH15-HY Condition: AVG_BE_54 3m 9120D_15_1620 HORIZONTAL Detector: R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project: 800518 Mode: 18 Setting: 11.5</p>
Avg.	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23 Site: 03CH15-HY Condition: AVG_BE_54 3m 9120D_15_1620 HORIZONTAL Detector: R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project: 800518 Mode: 18 Setting: 11.5</p>	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HV Condition : PCMK_BE_74 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : IR Setting : 11.5	Left blank
Avg.	 Site : 03CH15-HV Condition : AVG_BE_54 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : IR Setting : 11.5	Left blank



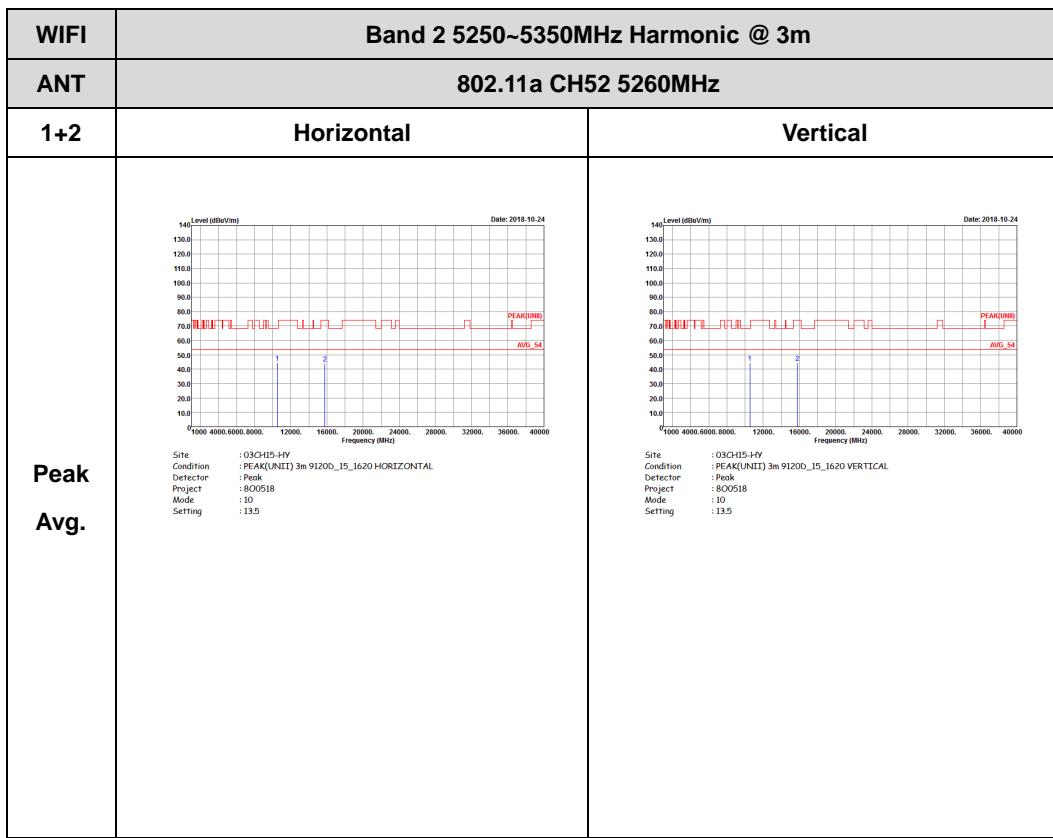


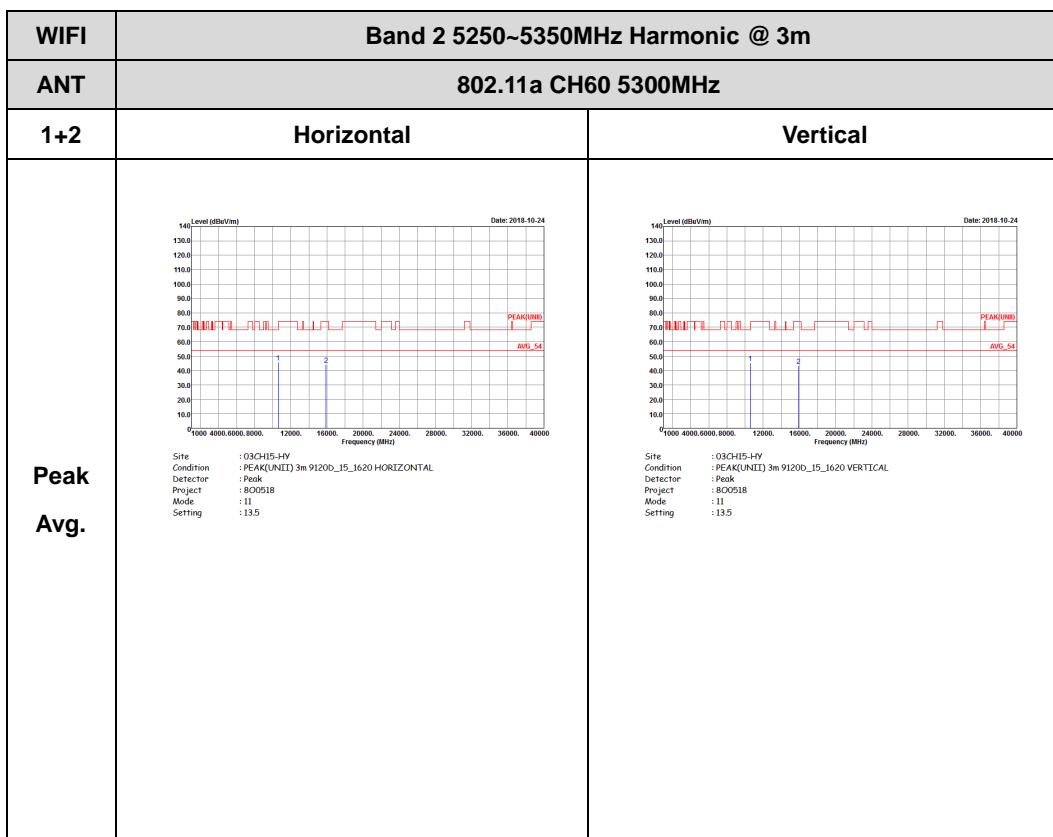
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1+2	Vertical	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : PCMK_BE_74 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : IR Setting : 11.5</p>	Left blank
Avg.	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_I5_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : IR Setting : 11.5</p>	Left blank

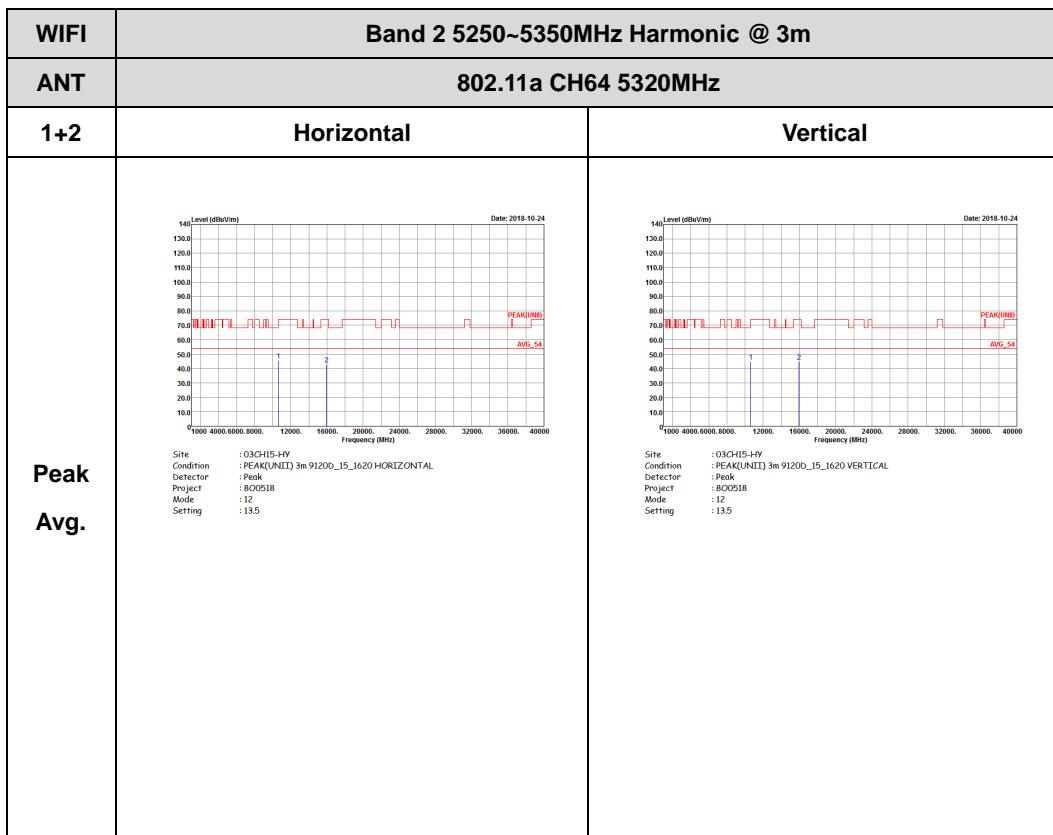


## Band 2 - 5250~5350MHz

## WIFI 802.11a (Harmonic @ 3m)

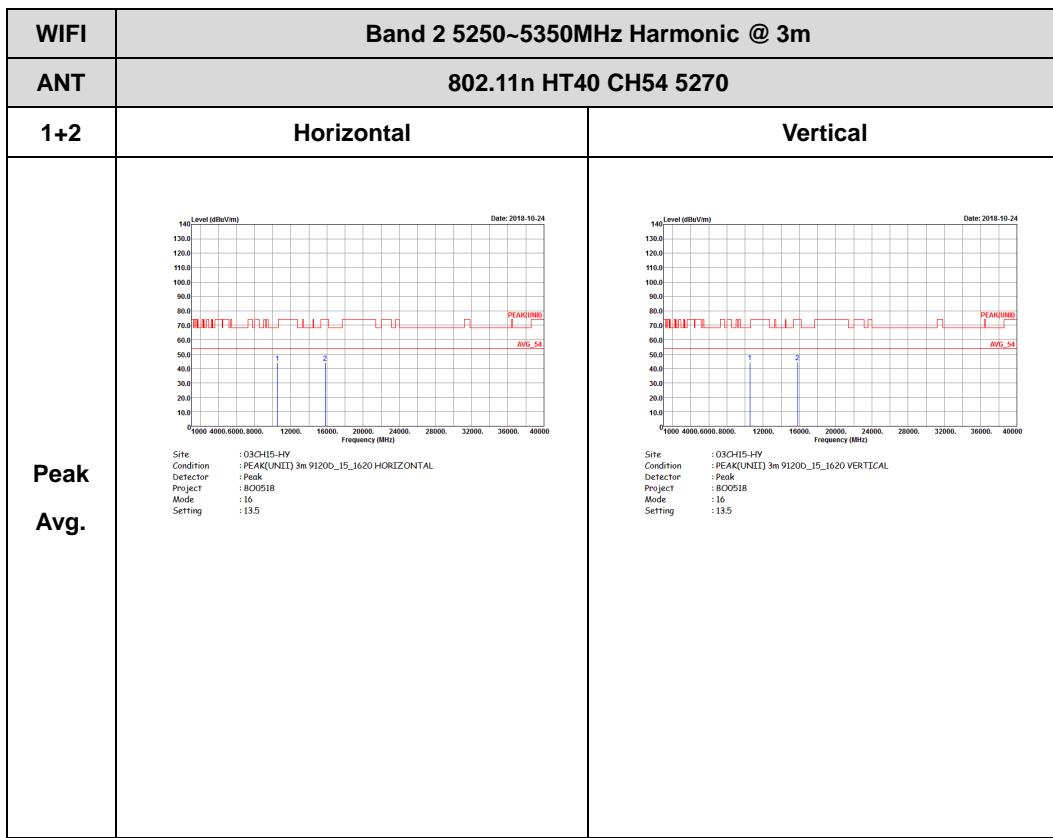


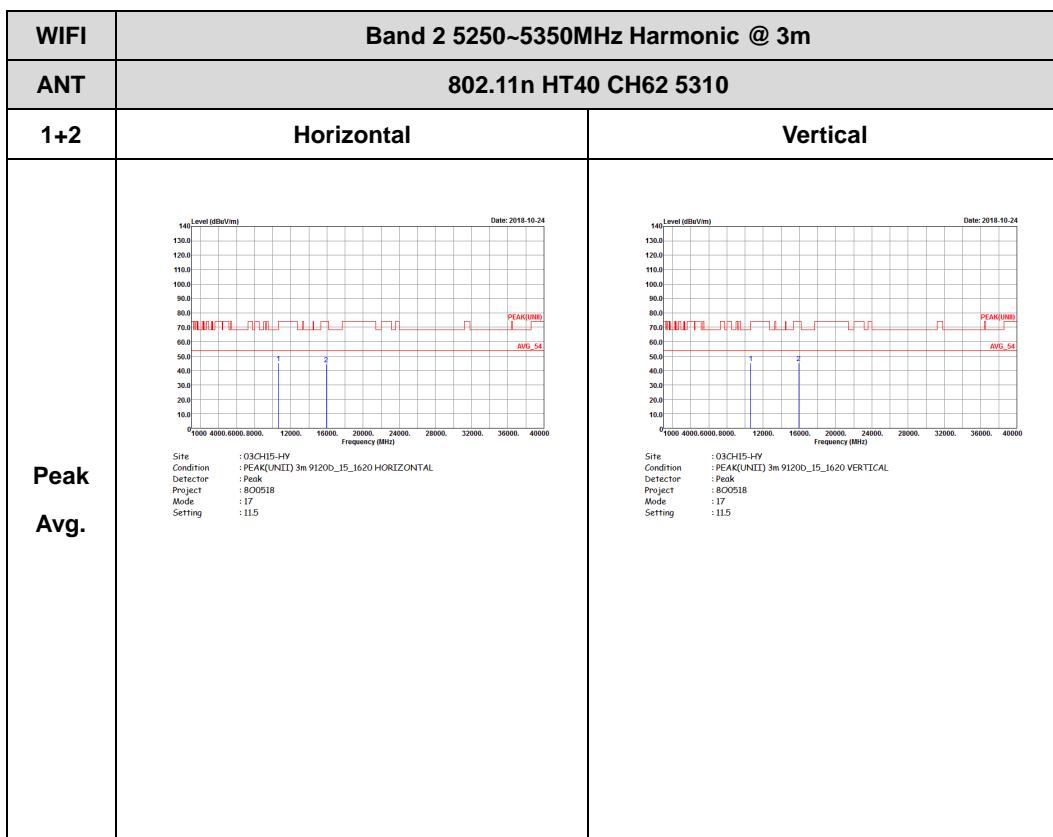






**Band 2 5250~5350MHz**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

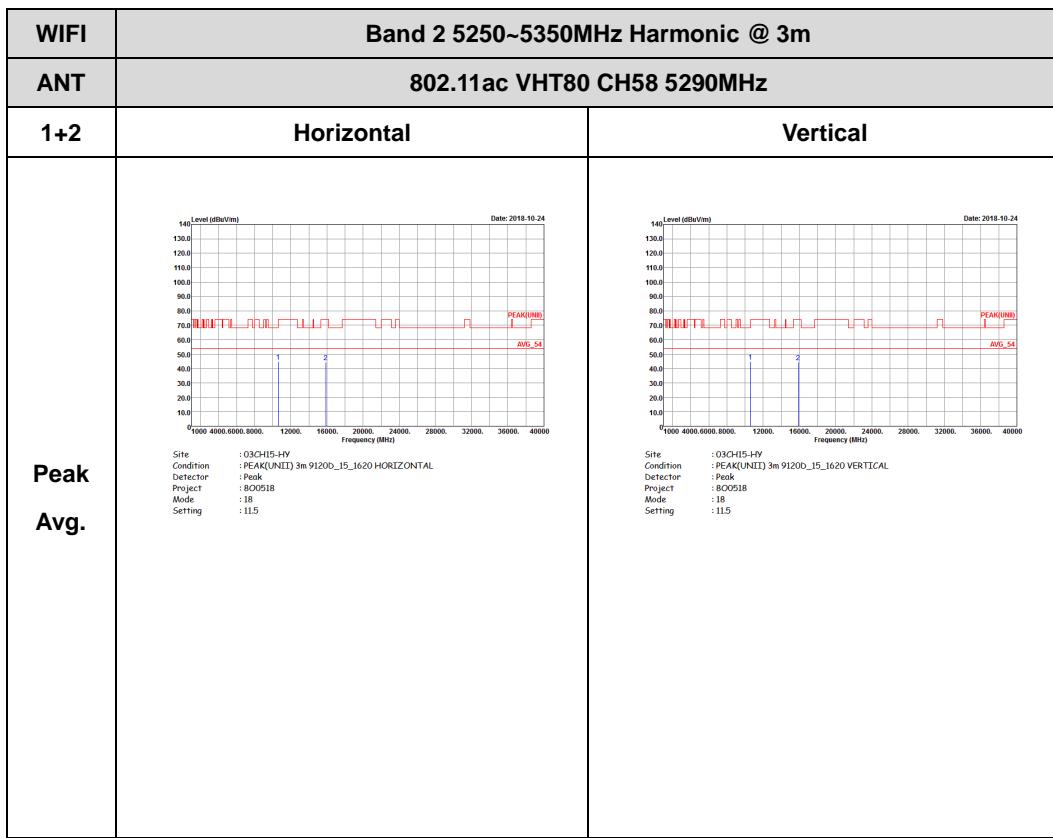






## Band 2 5250~5350MHz

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





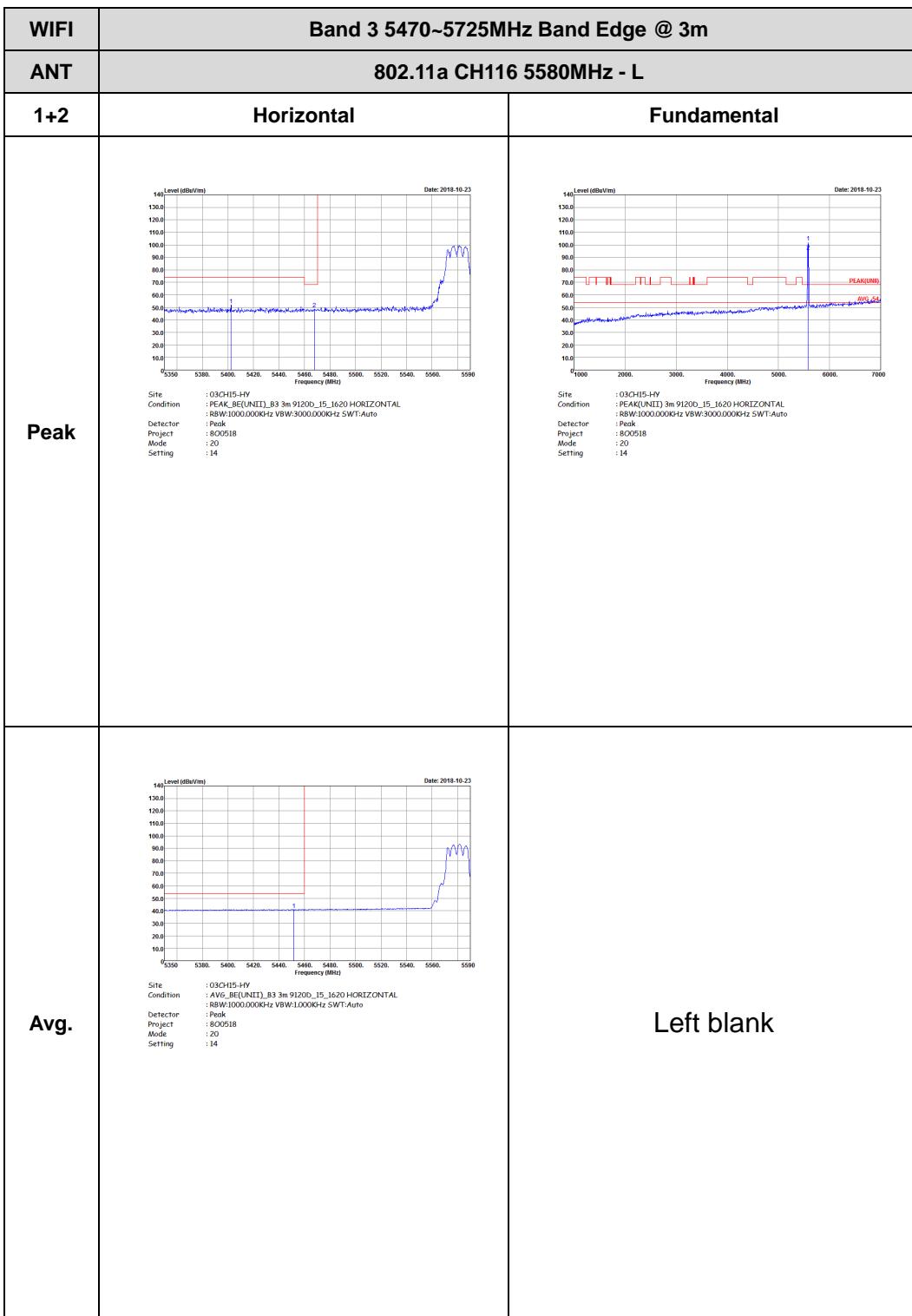
## Band 3 - 5470~5725MHz

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

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH100 5500MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_REF(UNIT), B3 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 19 Setting : 13.5	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 19 Setting : 13.5
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT), B3 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:1.000Hz SWT:Auto Project : 800518 Mode : 19 Setting : 13.5	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH100 5500MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PC4K_BE(UNIT), B3 3m 91200_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 19 Setting : 13.5	 Site : 03CH15-HY Condition : PC4K_BE(UNIT) 3m 91200_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 19 Setting : 13.5
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT), B3 3m 91200_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Project : 800518 Mode : 19 Setting : 13.5	Left blank





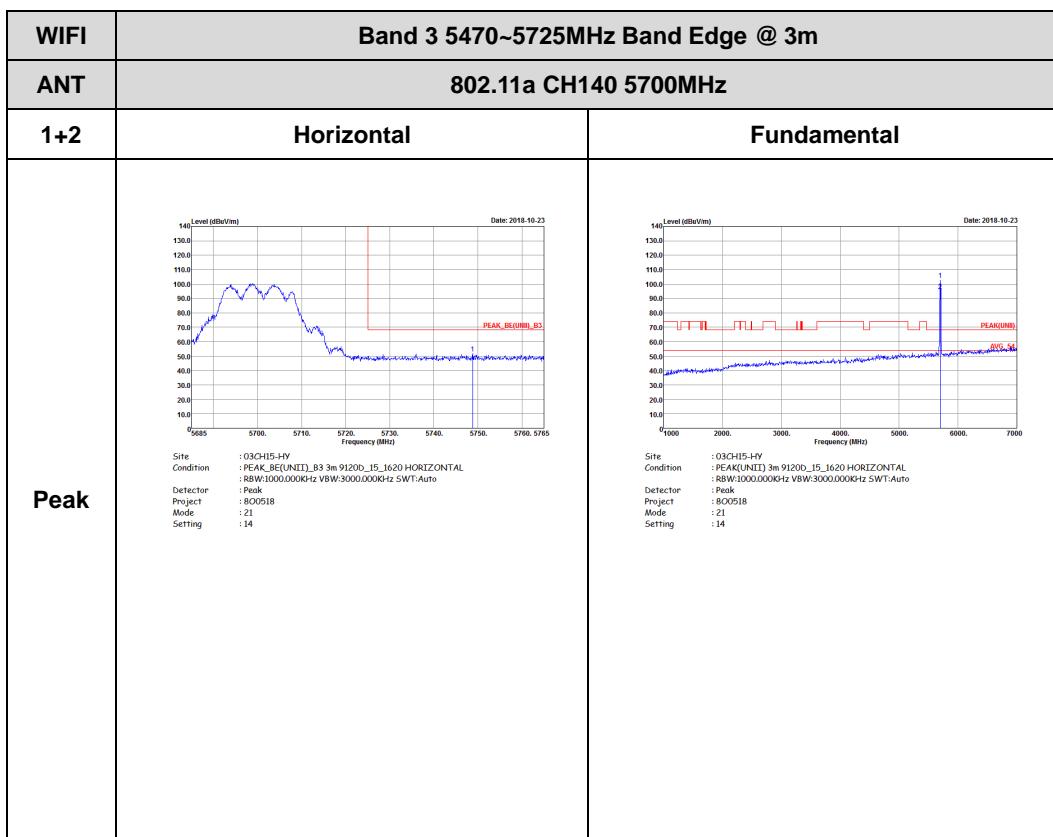
WIFI	Band 3 5470~5725MHz Band Edge @ 3m															
ANT	802.11a CH116 5580MHz - R															
1+2	Horizontal	Fundamental														
Peak	<p>The figure is a spectrum plot titled "Level (dBmV/m)" versus "Frequency (MHz)". The x-axis ranges from 5450 to 5765 MHz, and the y-axis ranges from 10.0 to 140.0 dBmV/m. A blue line shows a sharp peak at approximately 5580 MHz, reaching a level of about 95 dBmV/m. Two red vertical lines mark the edges of the band: one at 5470 MHz and another at 5725 MHz. The plot is dated 2018-10-23. Below the plot is a table of test parameters:</p> <table><tr><td>Site</td><td>: 03CH15-HY</td></tr><tr><td>Condition</td><td>: FCC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL</td></tr><tr><td></td><td>: 18W@1000.000KHz VSWR=3.00000Hz SWR:Auto</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 800518</td></tr><tr><td>Mode</td><td>: 20</td></tr><tr><td>Setting</td><td>: 14</td></tr></table>	Site	: 03CH15-HY	Condition	: FCC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL		: 18W@1000.000KHz VSWR=3.00000Hz SWR:Auto	Detector	: Peak	Project	: 800518	Mode	: 20	Setting	: 14	Left blank
Site	: 03CH15-HY															
Condition	: FCC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL															
	: 18W@1000.000KHz VSWR=3.00000Hz SWR:Auto															
Detector	: Peak															
Project	: 800518															
Mode	: 20															
Setting	: 14															

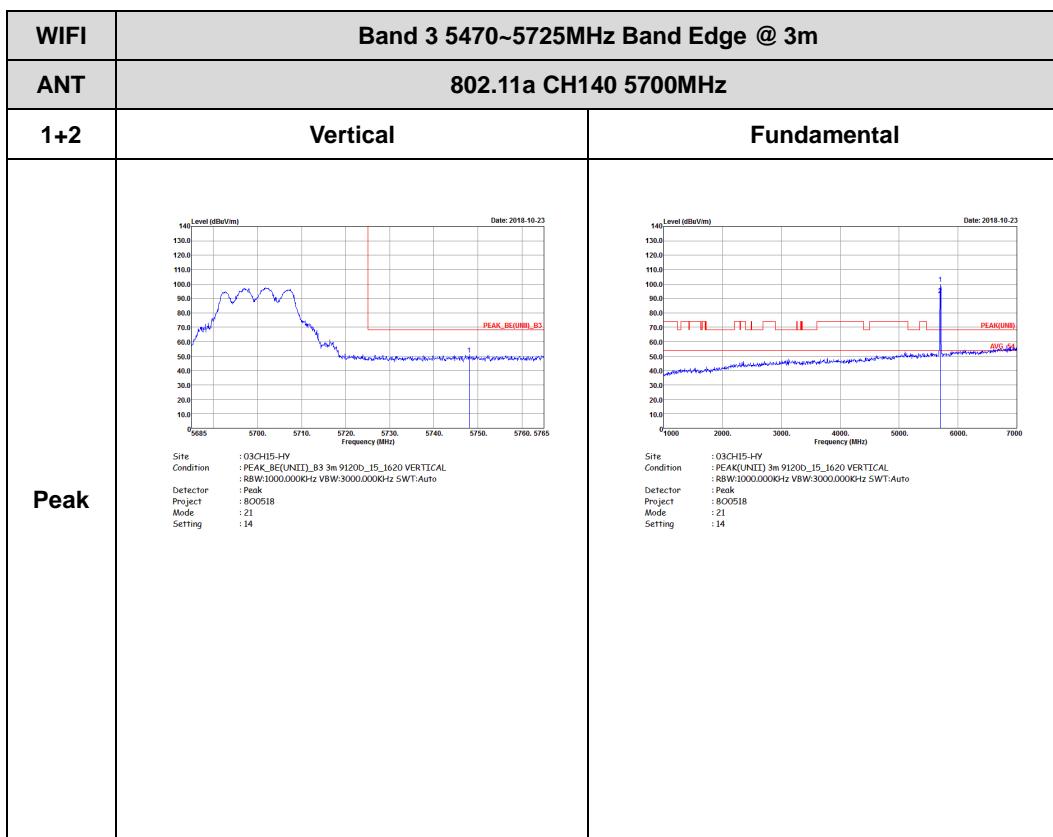


WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH116 5580MHz - L	
1+2	Vertical	Fundamental
Peak	 Site: 03CH15-HY Condition: PC4K_B(EUNIT), B3 3m 91200_15_1620 VERTICAL Detector: R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project: 800518 Mode: 20 Setting: 14	 Site: 03CH15-HY Condition: PC4K(B UNIT) 3m 91200_15_1620 VERTICAL Detector: R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project: 800518 Mode: 20 Setting: 14
Avg.	 Site: 03CH15-HY Condition: AVG_B(EUNIT), B3 3m 91200_15_1620 VERTICAL Detector: R8W:1000.000KHz VBW:1.000KHz SWT:Auto Project: 800518 Mode: 20 Setting: 14	Left blank



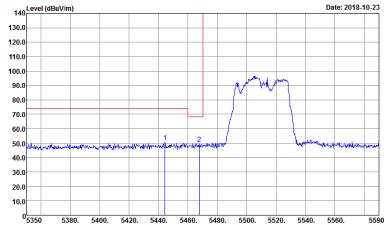
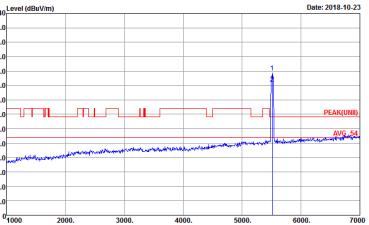
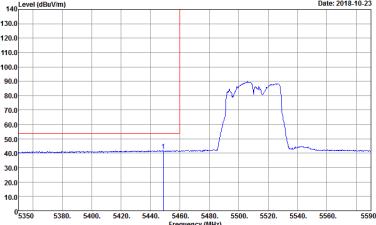
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH116 5580MHz - R	
1+2	Vertical	Fundamental
Peak	<p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>PEAK_BE(dBmV/m)</p> <p>Site : 03CH15-HY Condition : FCC-BE(UNID), B3 3m 91200_15_1620 VERTICAL Detector : 18MHz0.000000Hz VSWR=3000.0000Hz SWR=Auto Project : Peak Mode : 20 Setting : 14</p>	Left blank





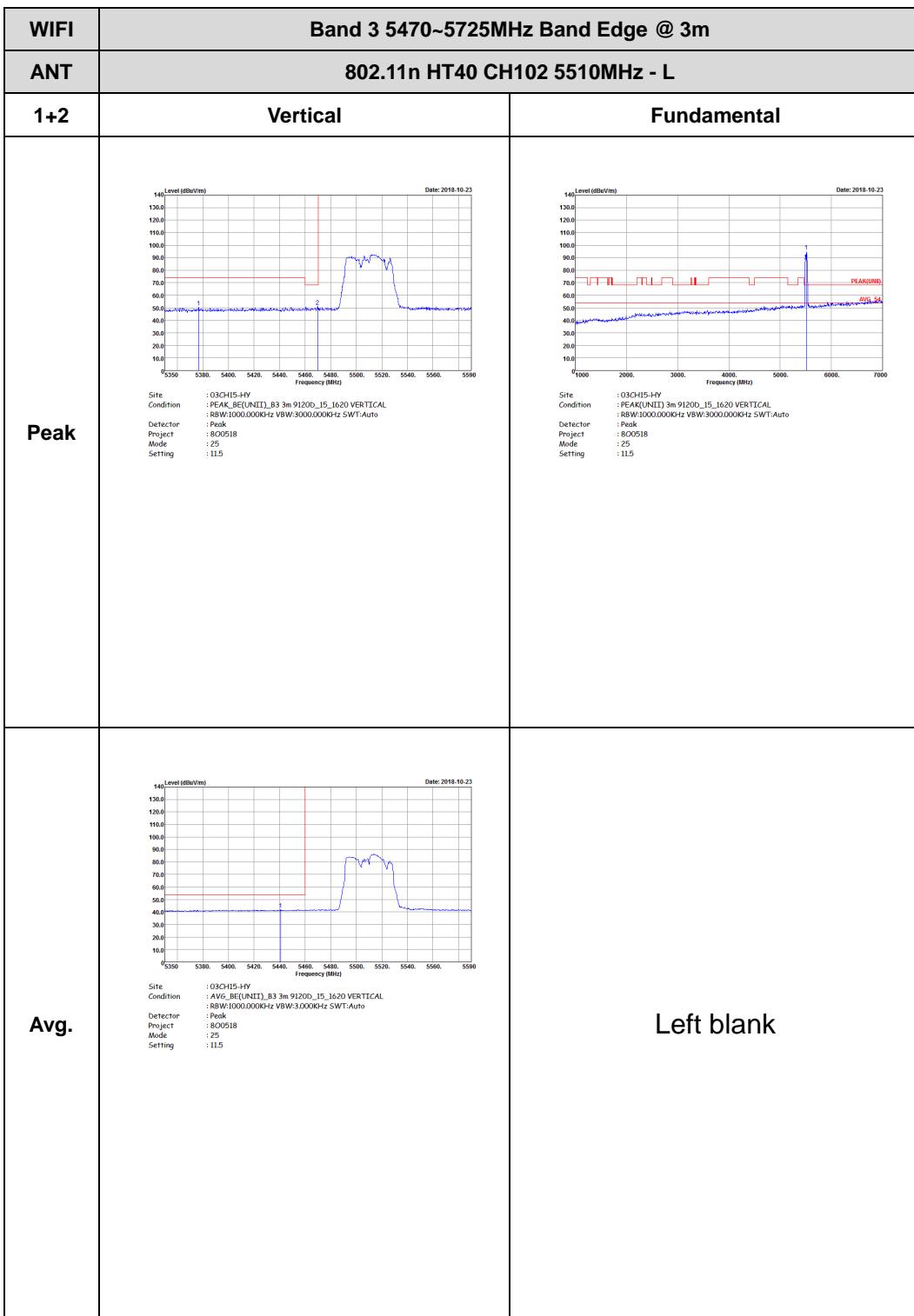


**Band 3 5470~5725MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23</p> <p>Site: 03CH15-HY Condition: PC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector: RBW:1000.000KHz VBW:3.000KHz SWT:Auto Project: 800518 Mode: Peak Setting: 25 Setting: 11.5</p>	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23</p> <p>Site: 03CH15-HY Condition: PC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector: RBW:1000.000KHz VBW:3.000KHz SWT:Auto Project: 800518 Mode: Peak Setting: 25 Setting: 11.5</p>
Avg.	 <p>Level (dBuV/m) vs Frequency (MHz) Date: 2018-10-23</p> <p>Site: 03CH15-HY Condition: AVG_BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector: RBW:1000.000KHz VBW:3.000KHz SWT:Auto Project: 800518 Mode: Peak Setting: 25 Setting: 11.5</p>	Left blank

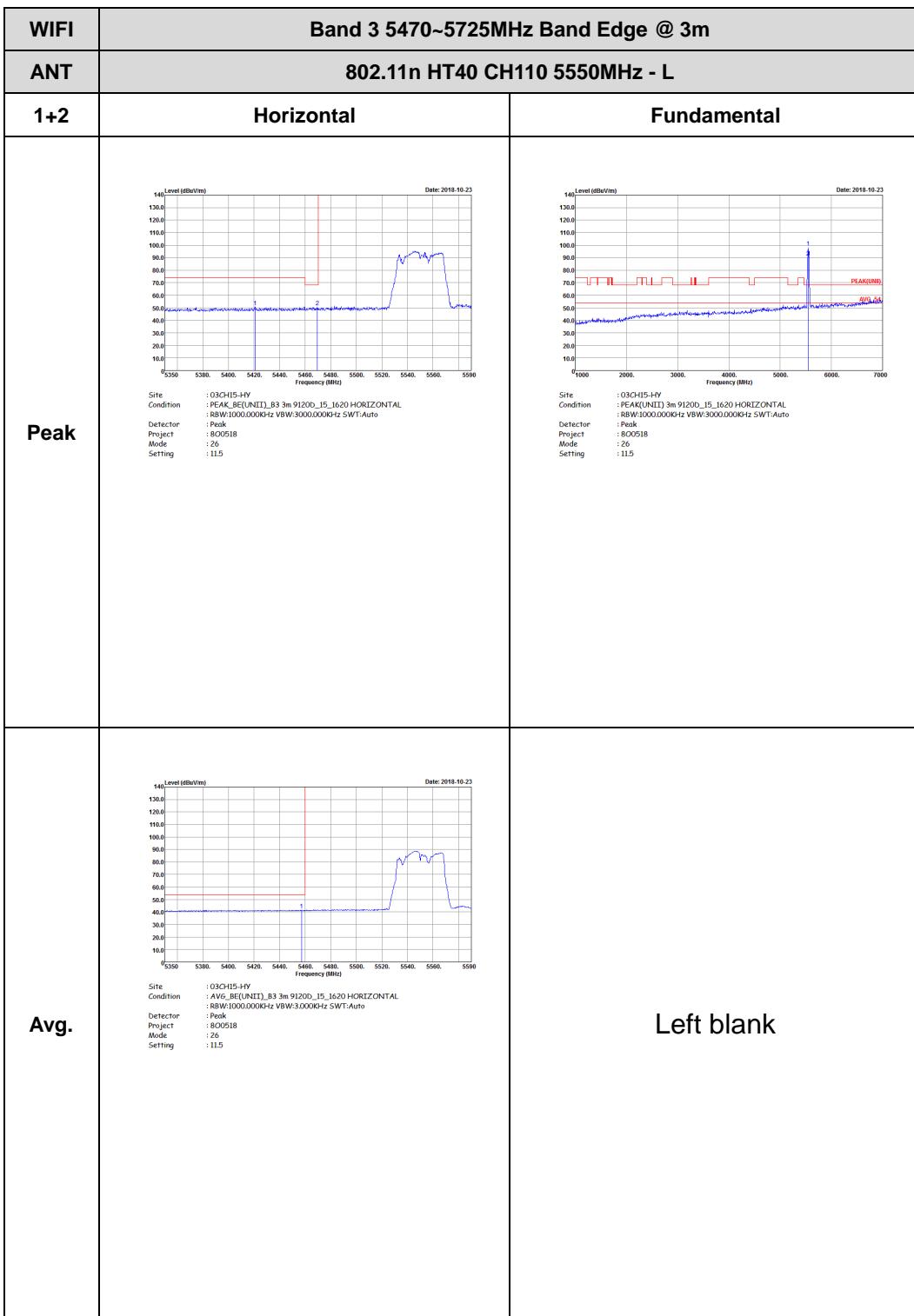


WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1+2	Horizontal	Fundamental
Peak	<p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : FCC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector : 18MHz000000Hz VSW-3000000Hz SWT:Auto Project : Peak Mode : 800518 Setting : 25 Setting : 11.5</p>	Left blank



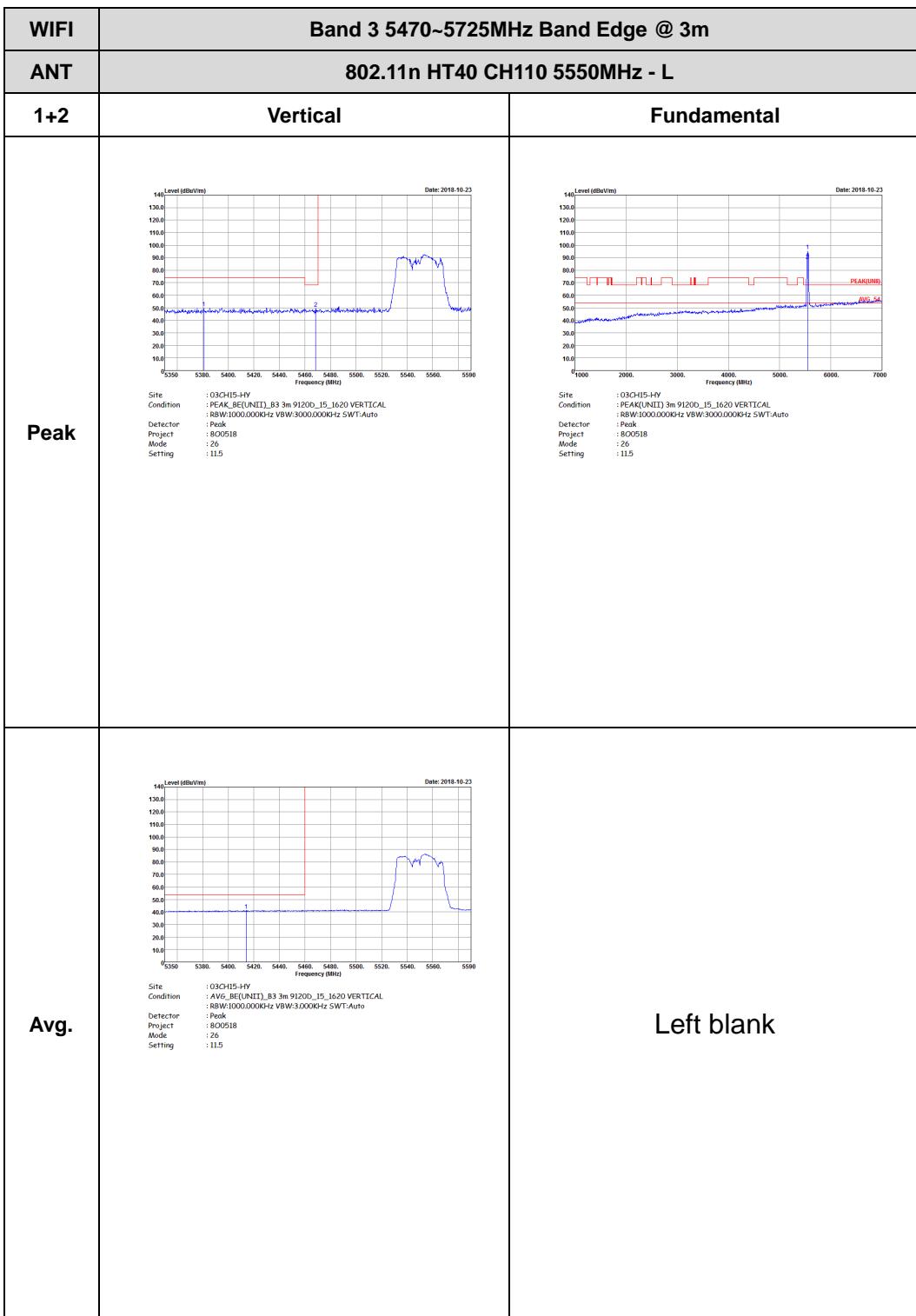


WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1+2	Vertical	Fundamental
Peak	<p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : PCMC_BE(UNID), B3 3m 91200_15_1620 VERTICAL Detector : Peak Project : 800518 Mode : 25 Setting : 11.5</p>	Left blank





WIFI	Band 3 5470~5725MHz Band Edge @ 3m															
ANT	802.11n HT40 CH110 5550MHz - R															
1+2	Horizontal	Fundamental														
Peak	<p>The graph displays a spectrum analysis plot titled "Level (dBmV/m)" versus "Frequency (MHz)". The x-axis ranges from 5450 to 5765 MHz, and the y-axis ranges from 10.0 to 140.0 dBmV/m. A prominent blue line shows a single sharp peak at approximately 5550 MHz, reaching a level of about 95 dBmV/m. Two red vertical markers indicate the peak frequency and its amplitude. Below the graph, a series of parameters are listed:</p> <table><tr><td>Site</td><td>: 03CH15-HY</td></tr><tr><td>Condition</td><td>: FCC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL</td></tr><tr><td></td><td>: 18W@1000.000KHz VSW-3000.000Hz SWR:Auto</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 800518</td></tr><tr><td>Mode</td><td>: 26</td></tr><tr><td>Setting</td><td>: 11.5</td></tr></table>	Site	: 03CH15-HY	Condition	: FCC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL		: 18W@1000.000KHz VSW-3000.000Hz SWR:Auto	Detector	: Peak	Project	: 800518	Mode	: 26	Setting	: 11.5	Left blank
Site	: 03CH15-HY															
Condition	: FCC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL															
	: 18W@1000.000KHz VSW-3000.000Hz SWR:Auto															
Detector	: Peak															
Project	: 800518															
Mode	: 26															
Setting	: 11.5															



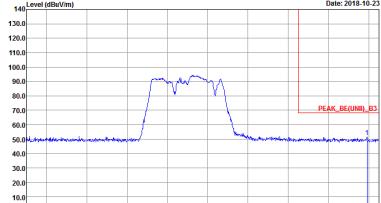


WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH110 5550MHz - R	
1+2	Vertical	Fundamental
Peak	<p>Level (dBmV/m)</p> <p>Frequency (MHz)</p> <p>Date: 2018-10-23</p> <p>Site : 03CH15-HY Condition : PCMC_BE(UNID), B3 3m 91200_15_1620 VERTICAL Detector : Peak Project : 800518 Mode : 26 Setting : 11.5</p>	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH134 5670MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PCAK_BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 27 Setting : 12	 Site : 03CH15-HY Condition : PCAK_B(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 27 Setting : 12
Avg.	 Site : 03CH15-HY Condition : AVG_B(E(UNIT)), B3 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 27 Setting : 12	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH134 5670MHz - R	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>PEAK_BE(0dB), B3</p> <p>Site : 03-CH15-HV Condition : FCC-BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector : 188W1000.000KHz VSW-3000.000Hz SWT:Auto Project : Peak Mode : 800518 Setting : 27 Setting : 12</p>	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH134 5670MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PCAK_BE(UNIT), B3 3m 91200_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 27 Setting : 12	 Site : 03CH15-HY Condition : PCAK_BE(UNIT) 3m 91200_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 27 Setting : 12
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT), B3 3m 91200_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 27 Setting : 12	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH134 5670MHz - R	
1+2	Vertical	Fundamental
Peak	<p>The graph displays a single sharp peak at approximately 5670 MHz, reaching a level of about 83 dBm/Hz. The x-axis represents Frequency (MHz) from 5500 to 5750, and the y-axis represents Level (dBm/Vm) from 10.0 to 140.0. A red box highlights the peak area with the label "PEAK_BE(0dB), B3".</p> <p>Date: 2018-10-23</p> <p>Site : 03-CH15-HV Condition : FCC-K, BE(UNID), B3 3m 91200_15_1620 VERTICAL Detector : 188W1000.000KHz VSWR:3000.0000Hz SWR:Auto Project : Peak Mode : 800518 Setting : 27 Setting : 12</p> <p>Left blank</p>	



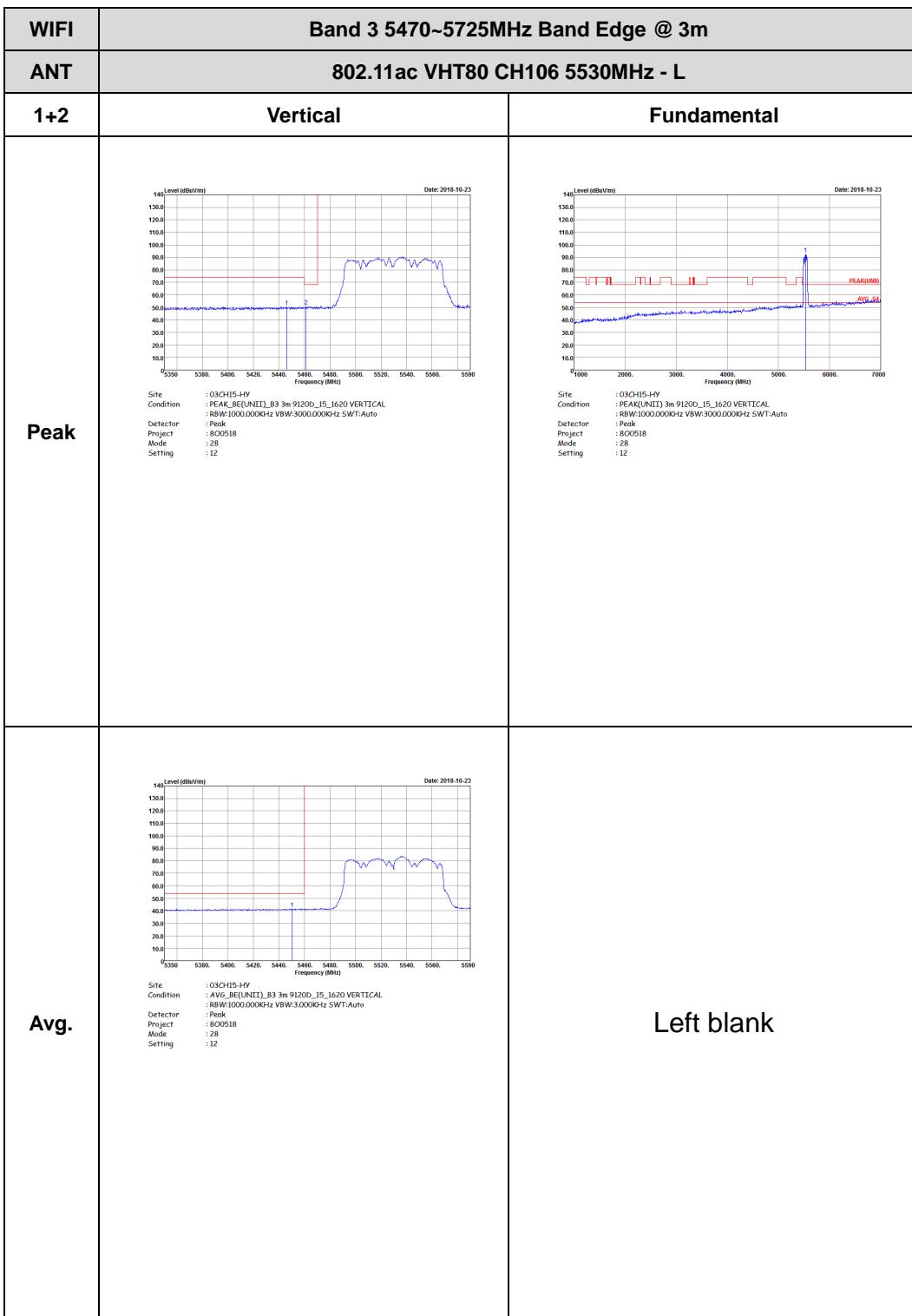
## Band 3 5470~5725MHz

## 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	 Site : 03CH15-HY Condition : AVG_BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : Peak Mode : 28 Setting : 12	 Site : 03CH15-HY Condition : AVG_BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : Peak Mode : 28 Setting : 12
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : Peak Mode : 28 Setting : 12	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1+2	Horizontal	Fundamental
Peak	<p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : PCMC_BE(UNIT), B3 3m 91200_15_1620 HORIZONTAL Detector : 18W1000.000KHz VSW-3000.000Hz SWT:Auto Detector : Peak Project : 800518 Mode : 28 Setting : 12</p>	Left blank



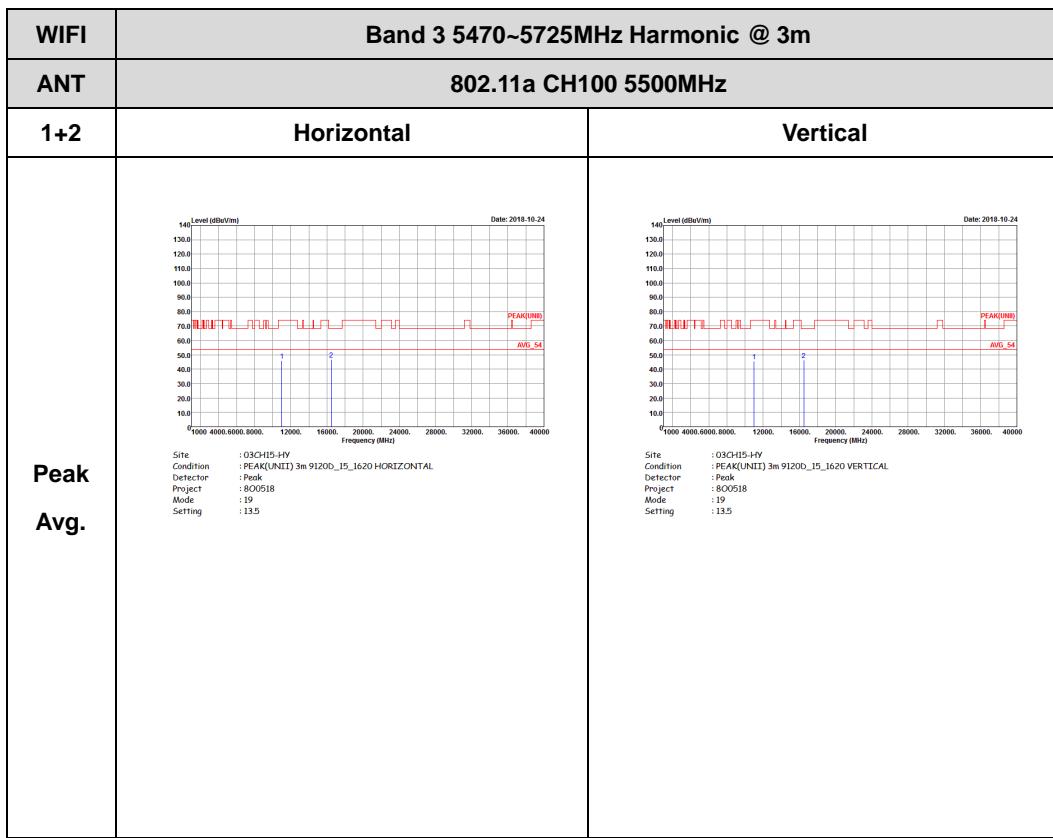


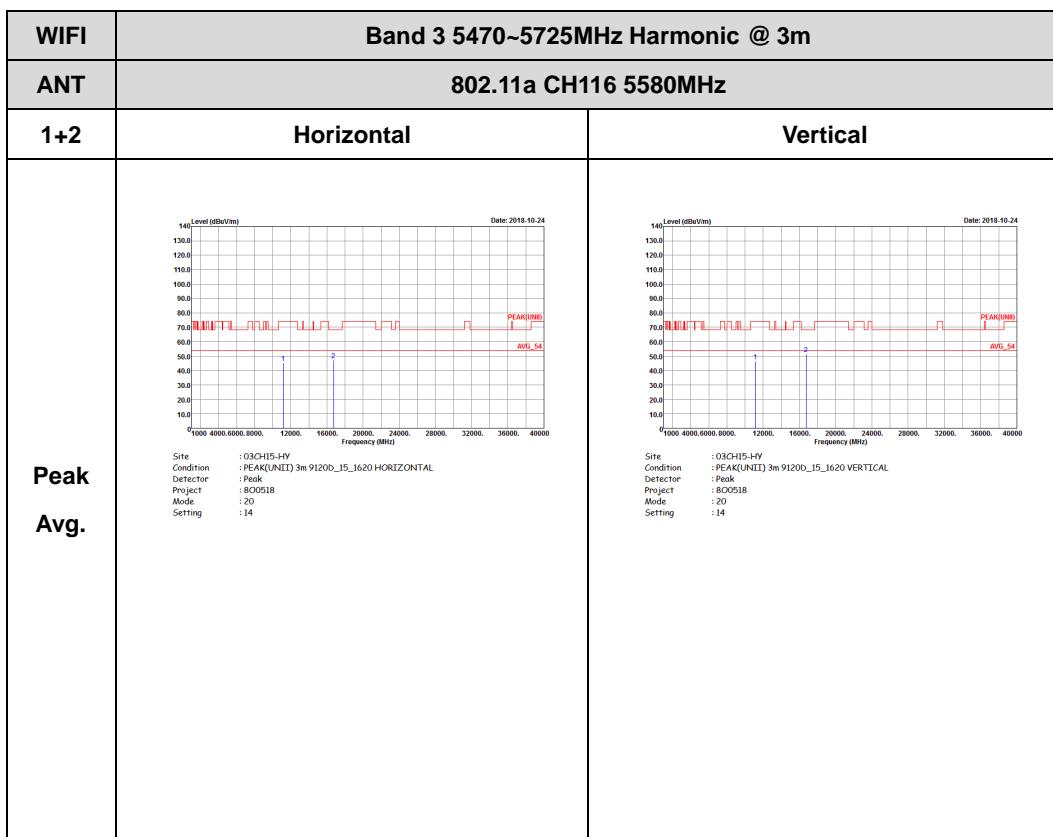
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1+2	Vertical	Fundamental
Peak	<p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HY Condition : PCMC_BE(UNID)_B3 3m 91200_1D_1620 VERTICAL Detector : 188W1000.000KHz VSW-3000.000Hz SWT:Auto Detector : Peak Project : 800518 Mode : 28 Setting : 12</p>	Left blank

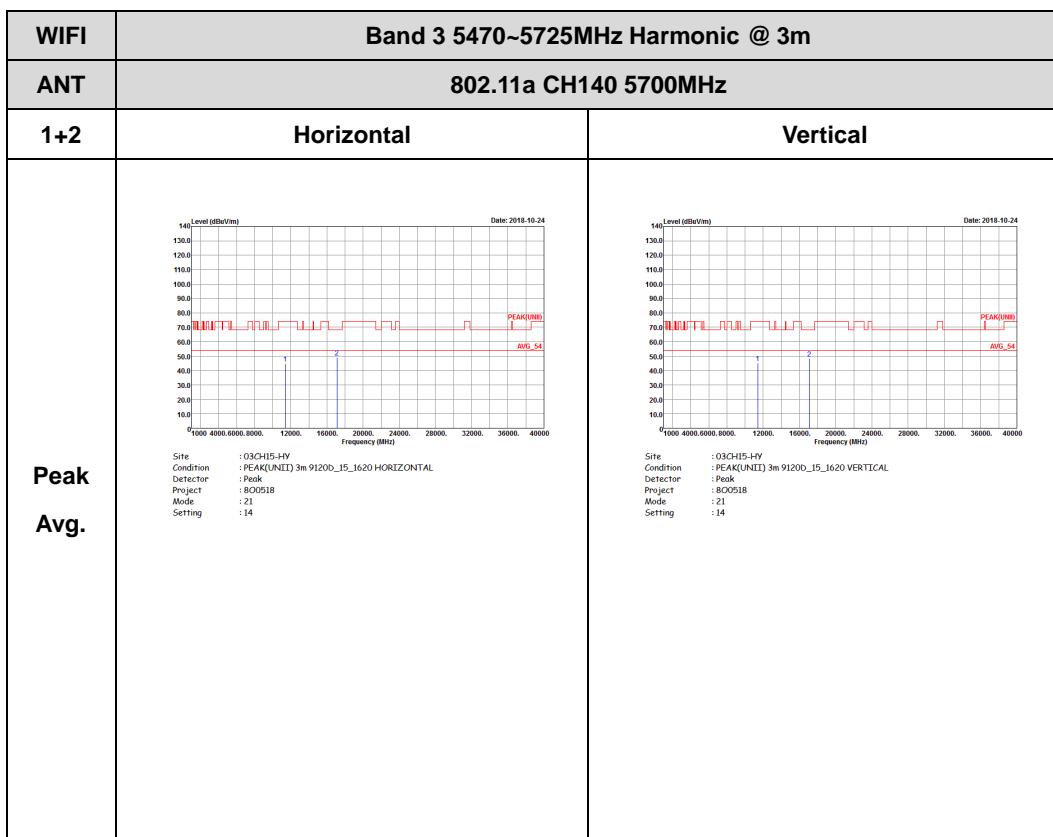


## Band 3 - 5470~5725MHz

## WIFI 802.11a (Harmonic @ 3m)

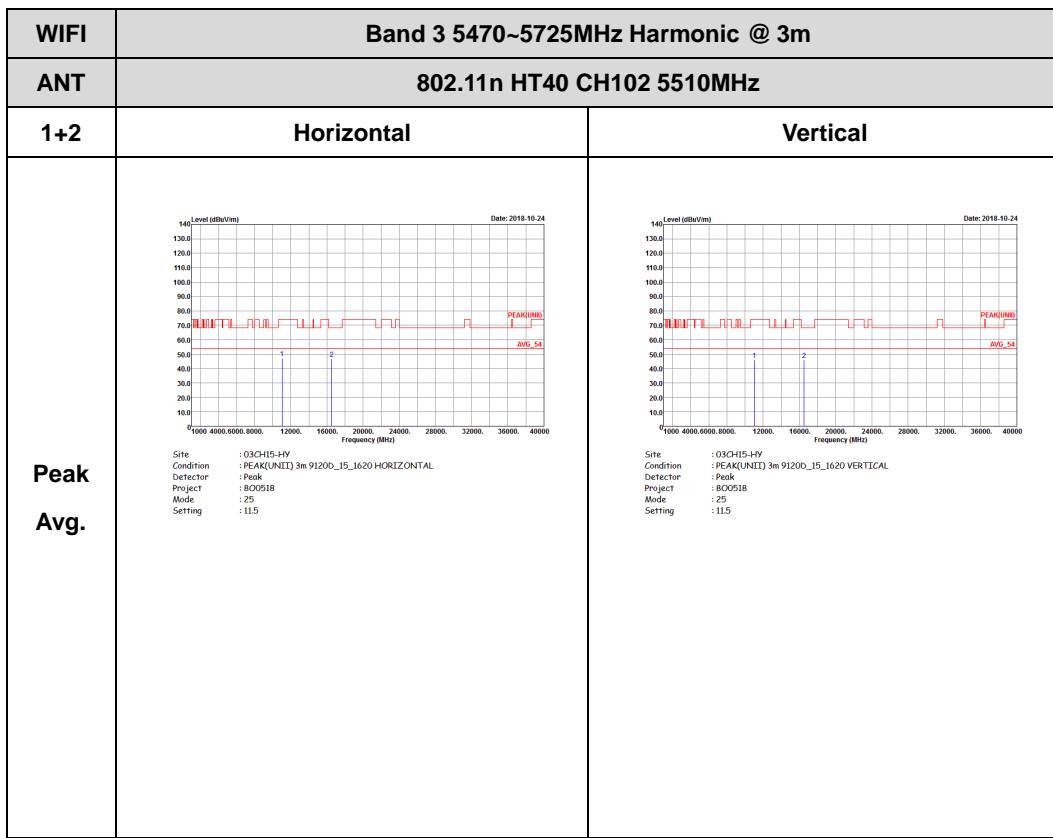


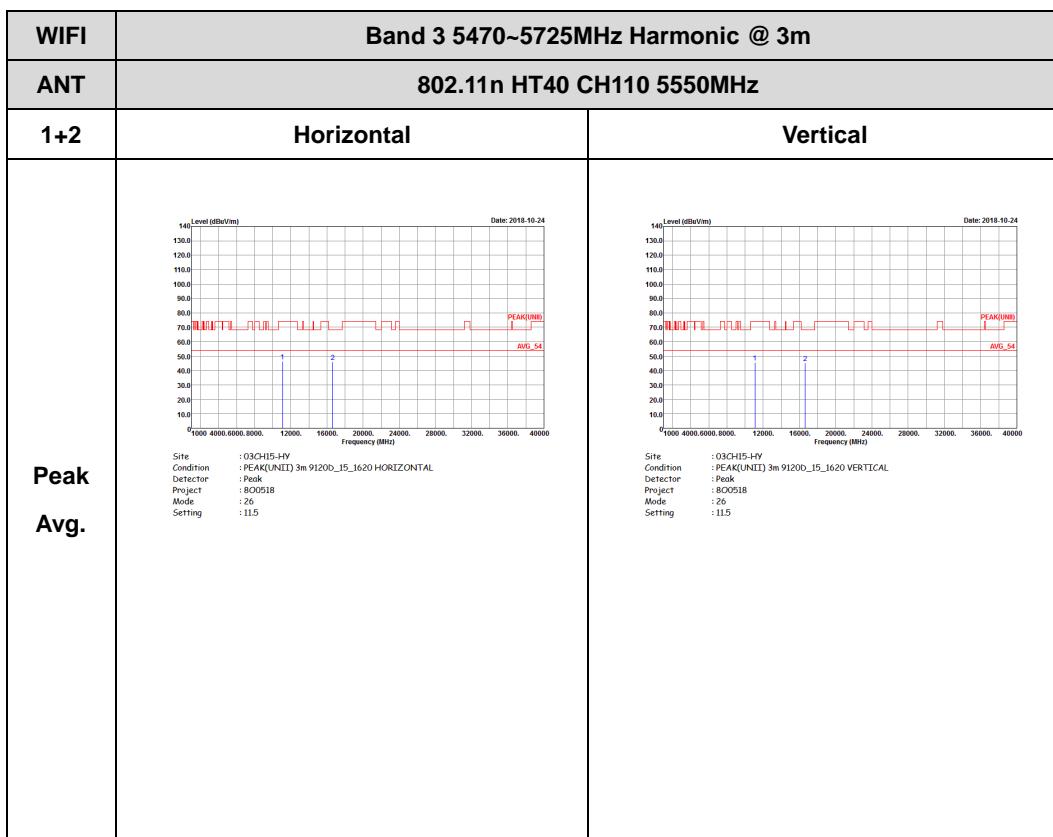


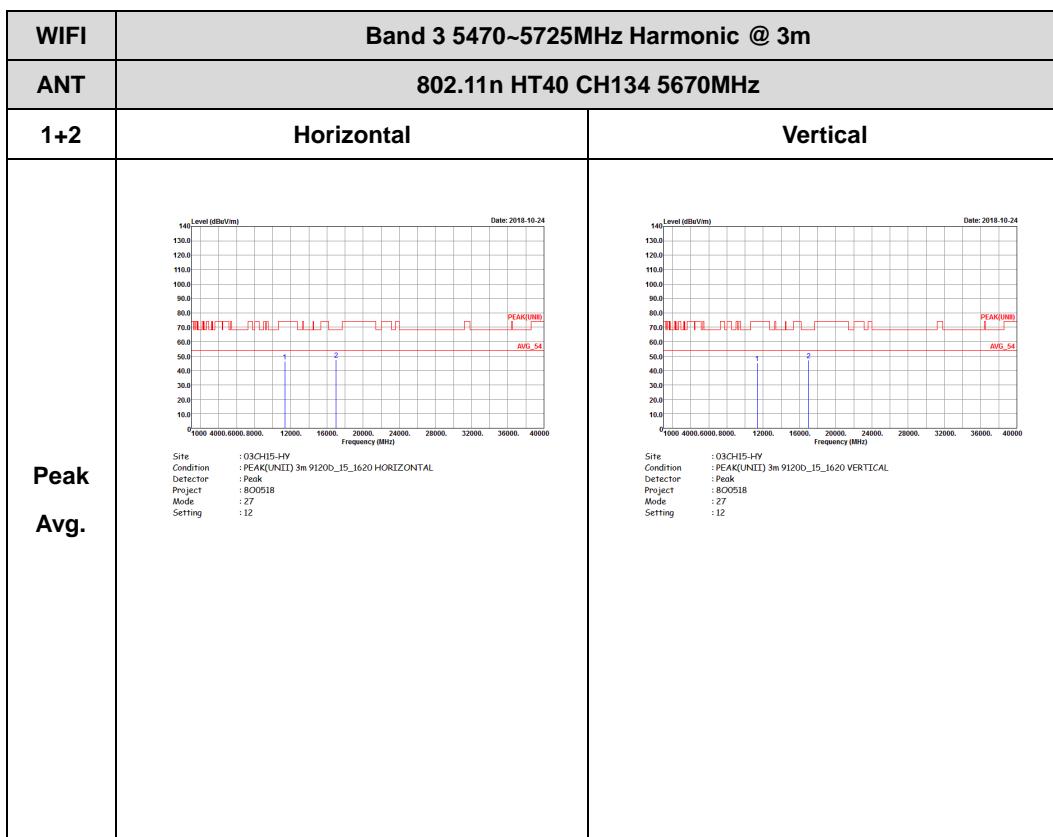




**Band 3 5470~5725MHz**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**



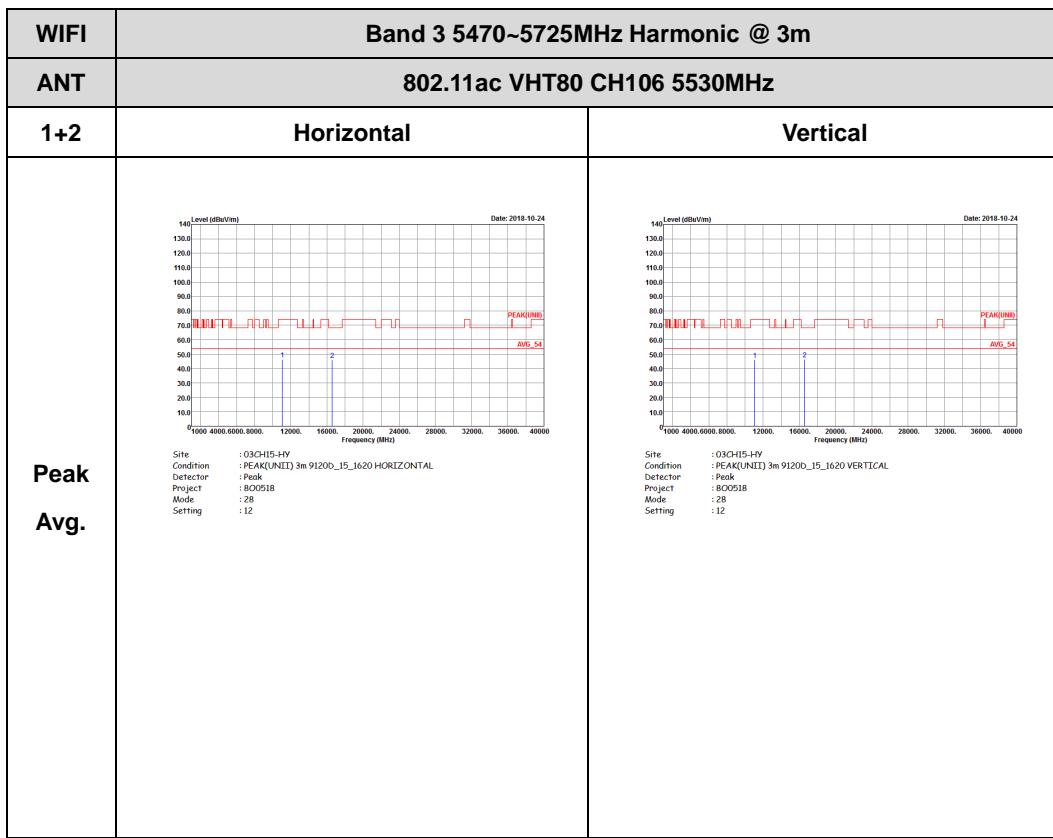






## Band 3 5470~5725MHz

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





## Band 3 - Straddle Channel

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

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11a CH144 5720MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03G115-HY Condition : STRADDLES U-NII-1A2A 3m 9120D_I5_1620 HORIZONTAL. Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 30 Setting : 14.5	 Site : 03G115-HY Condition : PEAK(UNIT) 3m 9120D_I5_1620 HORIZONTAL. Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 30 Setting : 14.5
Avg.	 Site : 03G115-HY Condition : U-NII-1&2 AVERAGE 3m 9120D_I5_1620 HORIZONTAL. Detector : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Project : 800518 Mode : 30 Setting : 14.5	Left blank



WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11a CH144 5720MHz - R	
1+2	Horizontal	Fundamental
Peak	<p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HV Condition : STRADDLES U-NI142A 3m 9120D_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VSW:3000.000KHz SWT:Auto Project : 800518 Mode : 30 Setting : 14.5</p>	Left blank



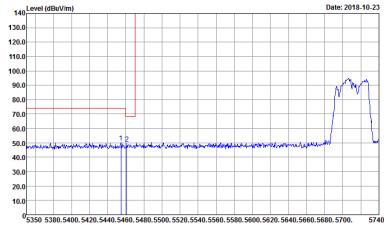
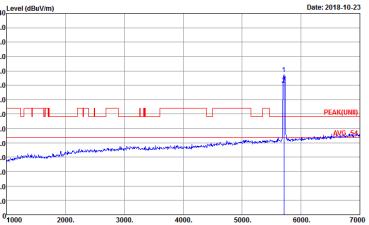
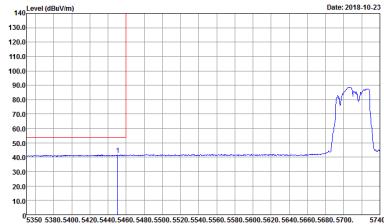
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11a CH144 5720MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : U-NIT-1&2 A 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 30 Setting : 14.5	 Site : 03CH15-HY Condition : PCAK(UNIT) 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3000.000Hz SWT:Auto Project : 800518 Mode : 30 Setting : 14.5
Avg.	 Site : 03CH15-HY Condition : U-NIT-1&2 A AVERAGE 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:1.000KHz SWT:Auto Project : 800518 Mode : 30 Setting : 14.5	Left blank



WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11a CH144 5720MHz - R	
1+2	Vertical	Fundamental
Peak	<p>Level (dBmV/m)</p> <p>Date: 2018-10-23</p> <p>Frequency (MHz)</p> <p>Site : 03CH15-HV Condition : STRADDLES U-NI142A 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VSW:3000.000KHz SWT:Auto Project : 800518 Mode : 30 Setting : 14.5</p>	Left blank



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

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11n HT40 CH142 5710MHz – L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : STANDALONE U-NII-1&2A 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : 32 Setting : 12	 Site : 03CH15-HY Condition : STANDALONE U-NII-1 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : 32 Setting : 12
Avg.	 Site : 03CH15-HY Condition : U-NII-1&2A AVERAGE 3m 91200_I5_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 32 Setting : 12	Left blank



WIFI	Band 3 Straddle Channel Band Edge @ 3m															
ANT	802.11n HT40 CH142 5710MHz - R															
1+2	Horizontal	Fundamental														
Peak	<p>Level (dBm/V/m) vs Frequency (MHz) graph. The x-axis ranges from 5700 to 5950 MHz, and the y-axis ranges from 10.0 to 140.0 dBm/V/m. A blue line shows a signal level starting around 95 dBm at 5700 MHz, dropping sharply to about 55 dBm at 5710 MHz, and remaining relatively flat thereafter. A red vertical bar highlights the channel center at 5710 MHz. The text "STRADDLES U-NI142A" is overlaid on the graph. Below the graph is a table of measurement parameters.</p> <table><tr><td>Site</td><td>: G3CH15-HV</td></tr><tr><td>Condition</td><td>: STRADDLES U-NI142A 3m 9120D_15_1620 HORIZONTAL</td></tr><tr><td></td><td>: R8W:1000.000KHz VSW:3000.000KHz SWT:Auto</td></tr><tr><td>Detector</td><td>: Peak</td></tr><tr><td>Project</td><td>: 800518</td></tr><tr><td>Mode</td><td>: 32</td></tr><tr><td>Setting</td><td>: 12</td></tr></table>	Site	: G3CH15-HV	Condition	: STRADDLES U-NI142A 3m 9120D_15_1620 HORIZONTAL		: R8W:1000.000KHz VSW:3000.000KHz SWT:Auto	Detector	: Peak	Project	: 800518	Mode	: 32	Setting	: 12	Left blank
Site	: G3CH15-HV															
Condition	: STRADDLES U-NI142A 3m 9120D_15_1620 HORIZONTAL															
	: R8W:1000.000KHz VSW:3000.000KHz SWT:Auto															
Detector	: Peak															
Project	: 800518															
Mode	: 32															
Setting	: 12															



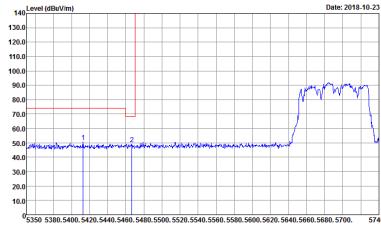
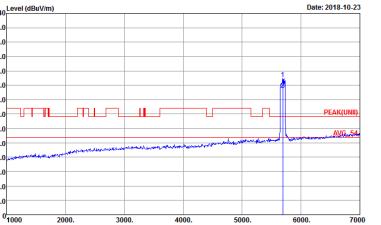
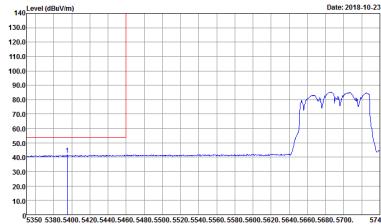
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11n HT40 CH142 5710MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : U-NIT-1&2 A 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 32 Setting : 12	 Site : 03CH15-HY Condition : PC4K(UNIT) 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000.000KHz SWT:Auto Project : 800518 Mode : 32 Setting : 12
Avg.	 Site : 03CH15-HY Condition : U-NIT-1&2 A AVERAGE 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 32 Setting : 12	Left blank



WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11n HT40 CH142 5710MHz - R	
1+2	Vertical	Fundamental
Peak	<p>Level (dBm/V/m) vs Frequency (MHz) plot. The x-axis ranges from 5700 to 5950 MHz, and the y-axis ranges from 10.0 to 140.0 dBm/V/m. A blue line shows a sharp drop from approximately 90 dBm at 5710 MHz to about 55 dBm. A red vertical bar highlights the channel center at 5710 MHz. The text 'STRADDLES U-NI142A' is overlaid on the graph. Below the graph are the following parameters:</p> <p>Site : 03CH15-HV Condition : STRADDLES U-NI142A 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VSW:3000.000KHz SWT:Auto Project : Peak Mode : 32 Setting : 12</p>	Left blank



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

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : STANDALONE U-NII-1&2A 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : 33 Setting : 12	 Site : 03CH15-HY Condition : STANDALONE U-NII-1 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 800518 Mode : 33 Setting : 12
Avg.	 Site : 03CH15-HY Condition : U-NII-1&2A AVERAGE 3m 91200_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 33 Setting : 12	Left blank

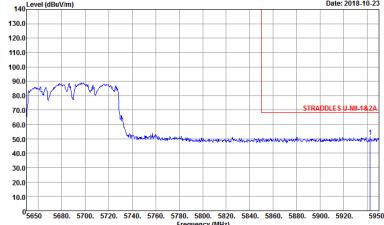


WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - R	
1+2	Horizontal	Fundamental
Peak	<p>Site : G3CH15-HV Condition : STRADDLES U-NII-1&amp;2A 3m 9120D_15_1620 HORIZONTAL Detector : R8W:1000.000KHz VSW:3000.000Hz SWT:Auto Project : 800518 Mode : 33 Setting : 12</p>	Left blank



WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : U-NIT-1&2 A AVERAGE 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 33 Setting : 12	 Site : 03CH15-HY Condition : PCAK(UNIT) 3m 9120D_15_1620 VERTICAL Detector : Peak Project : 800518 Mode : 33 Setting : 12
Avg.	 Site : 03CH15-HY Condition : U-NIT-1&2 A AVERAGE 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VBW:3.000KHz SWT:Auto Project : 800518 Mode : 33 Setting : 12	Left blank

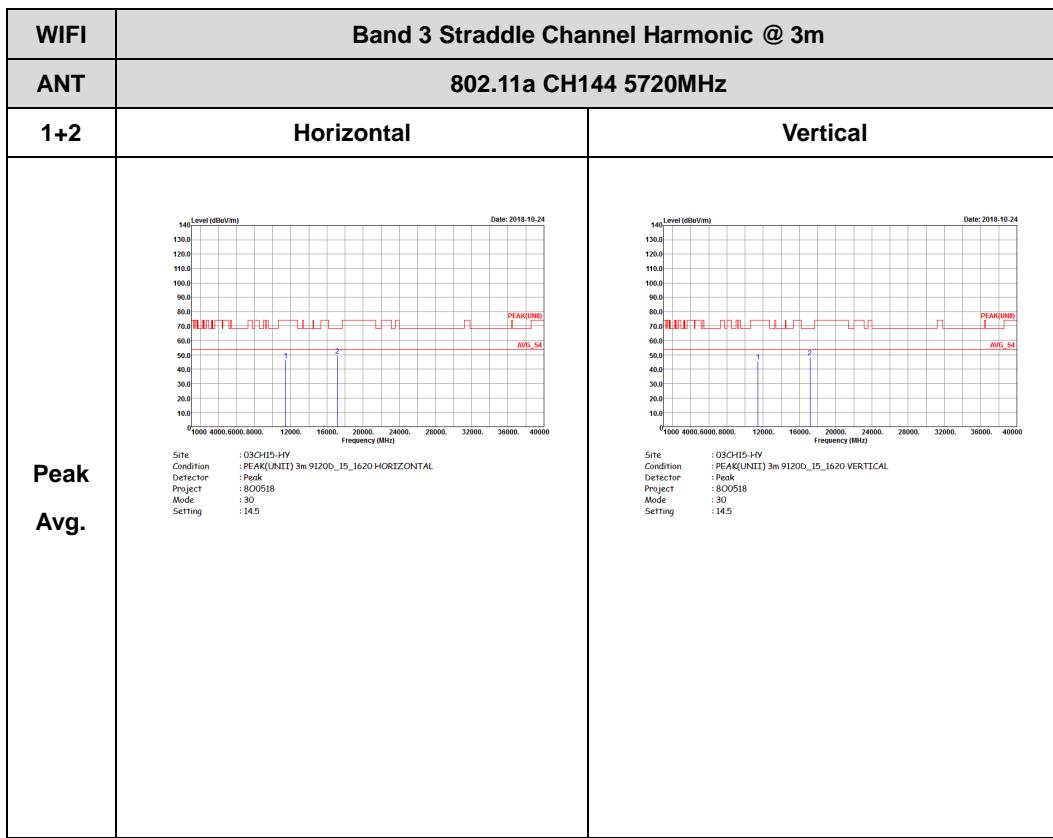


WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz - R	
1+2	Vertical	Fundamental
Peak	 <p>Level (dBm/V/m) Date: 2018-10-23</p> <p>5650 5660 5670 5680 5690 5700 5710 5720 5730 5740 5750 5760 5770 5780 5790 5800 5810 5820 5830 5840 5850 5860 5870 5880 5890 5900 5910 5920 5930</p> <p>Site : GSCH15-HV Condition : STRADDLES U-NII-1&amp;2A 3m 9120D_15_1620 VERTICAL Detector : R8W:1000.000KHz VSW:3000.000KHz SWT:Auto Project : 800518 Mode : 33 Setting : 12</p>	Left blank



## Band 3 - Straddle Channel

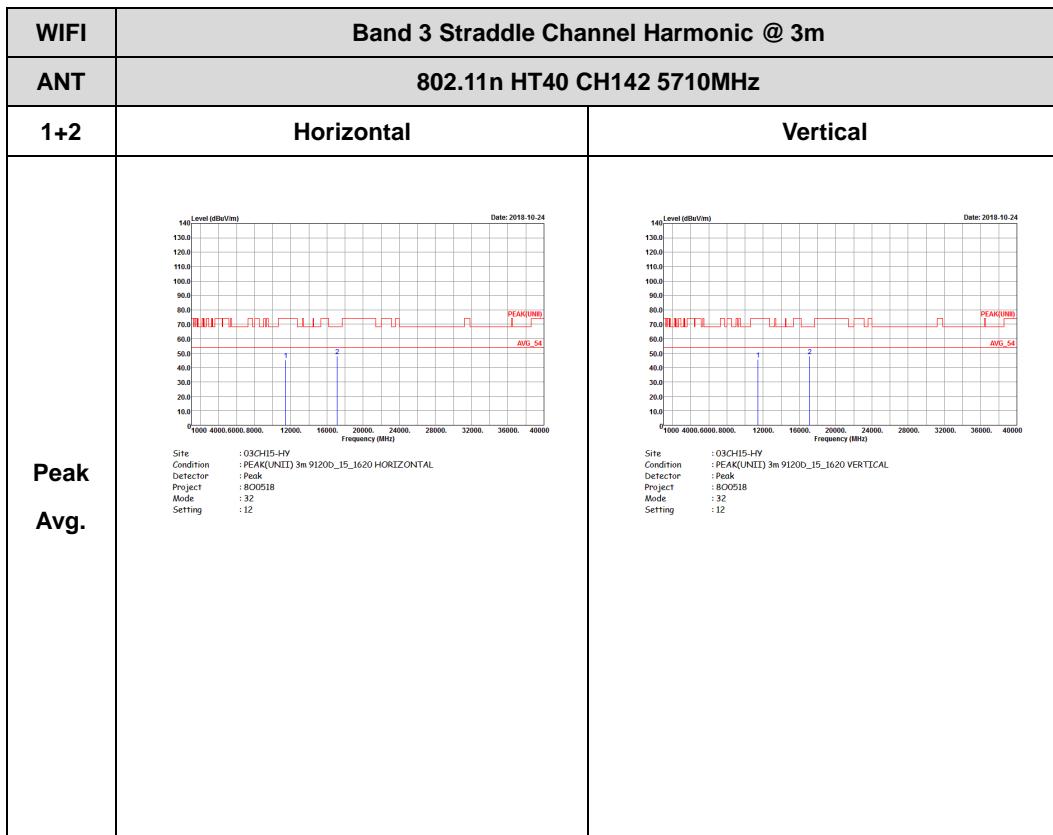
## WIFI 802.11a (Harmonic @ 3m)





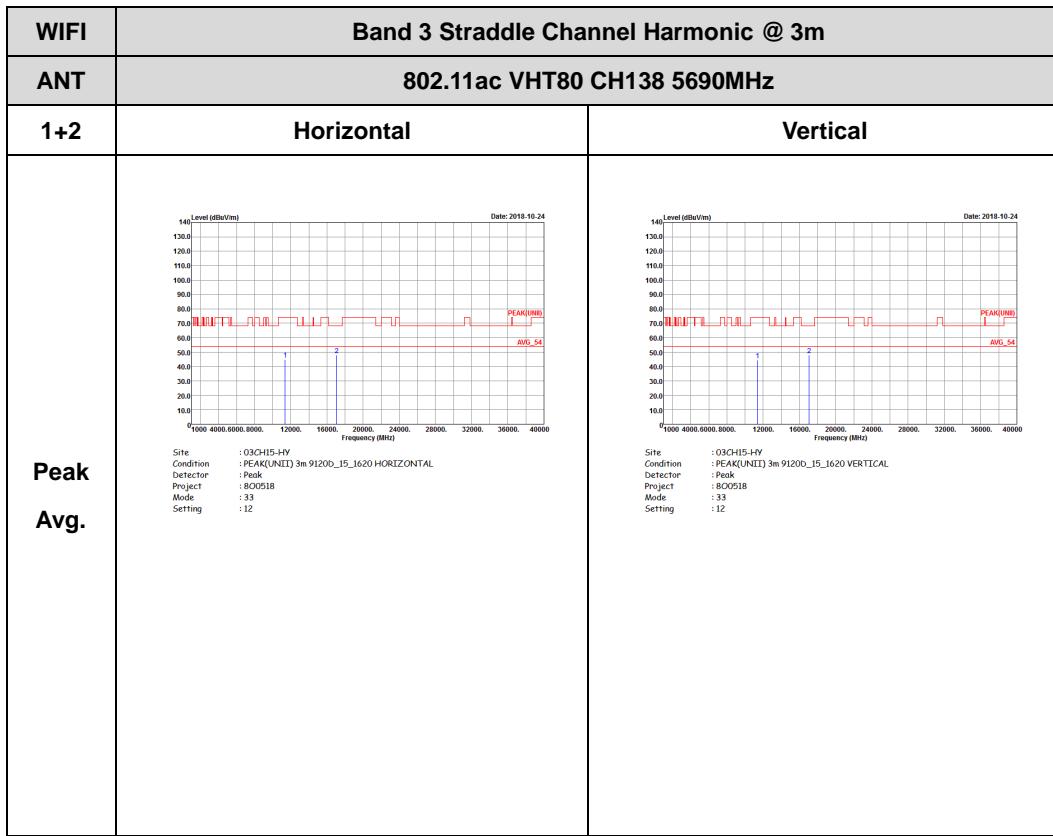
## Band 3 – Straddle Channel

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





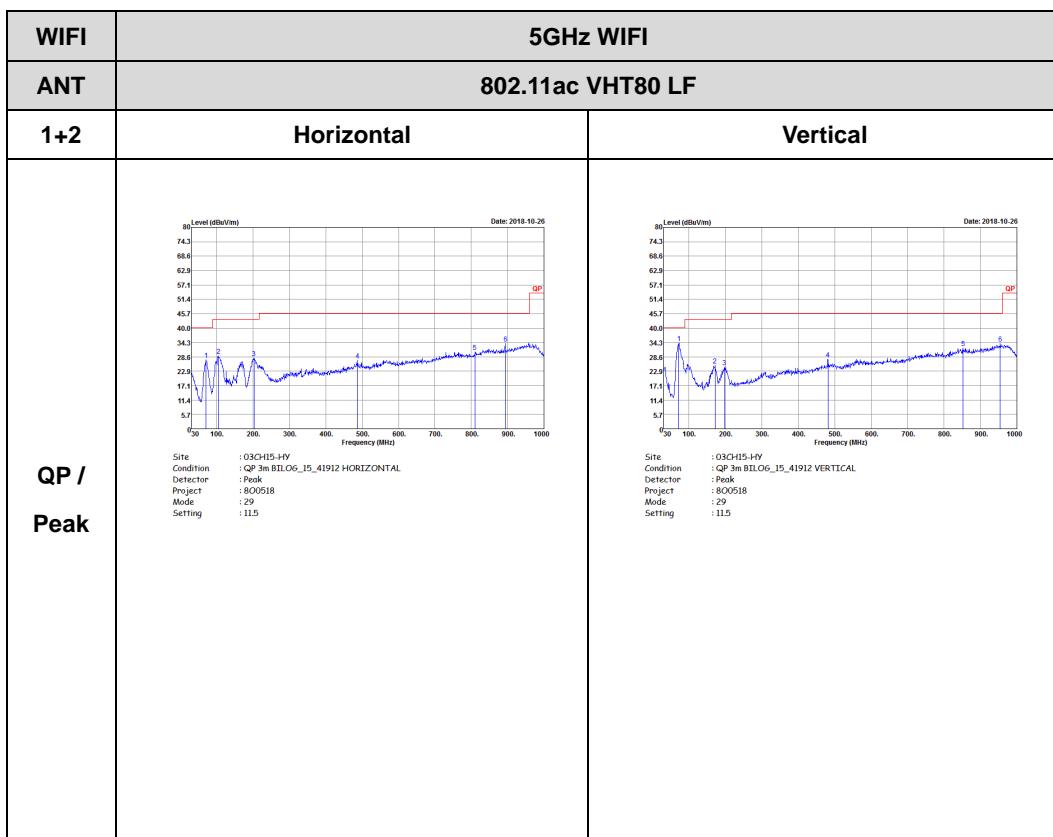
**Band 3 – Straddle Channel**  
**WIFI 802.11ac VHT80 (Harmonic @ 3m)**





## Emission below 1GHz

## 5GHz WIFI 802.11ac VHT80 (LF)





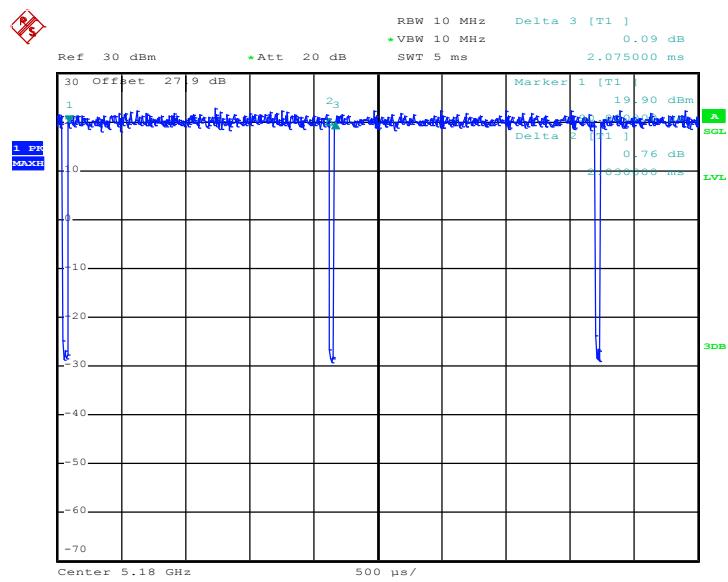
## Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1	802.11a	97.83	2030.00	0.49	1kHz	0.10
2	802.11a	97.83	2030.00	0.49	1kHz	0.10
1+2	802.11a for Ant. 1	97.84	2035.00	0.49	1kHz	0.09
1+2	802.11a for Ant. 2	97.83	2030.00	0.49	1kHz	0.10
1	5GHz 802.11n HT20	97.93	1890.00	0.53	1kHz	0.09
2	5GHz 802.11n HT20	97.67	1890.00	0.53	1kHz	0.10
1+2	5GHz 802.11n HT20 for Ant. 1	97.43	1895.00	0.53	1kHz	0.11
1+2	5GHz 802.11n HT20 for Ant. 2	97.67	1890.00	0.53	1kHz	0.10
1	5GHz 802.11n HT40	95.88	930.00	1.08	3kHz	0.18
2	5GHz 802.11n HT40	95.34	920.00	1.09	3kHz	0.21
1+2	5GHz 802.11n HT40 for Ant. 1	95.88	930.00	1.08	3kHz	0.18
1+2	5GHz 802.11n HT40 for Ant. 2	95.88	930.00	1.08	3kHz	0.18
1	5GHz 802.11ac VHT20	97.44	1900.00	0.53	1kHz	0.11
2	5GHz 802.11ac VHT20	97.95	1910.00	0.52	1kHz	0.09
1+2	5GHz 802.11ac VHT20 for Ant. 1	98.20	-	-	10Hz	0.08
1+2	5GHz 802.11ac VHT20 for Ant. 2	97.69	1905.00	0.52	1kHz	0.10
1	5GHz 802.11ac VHT40	96.39	935.00	1.07	3kHz	0.16
2	5GHz 802.11ac VHT40	95.90	935.00	1.07	3kHz	0.18
1+2	5GHz 802.11ac VHT40 for Ant. 1	95.41	935.00	1.07	3kHz	0.20
1+2	5GHz 802.11ac VHT40 for Ant. 2	95.94	945.00	1.06	3kHz	0.18
1	5GHz 802.11ac VHT80	91.92	455.00	2.20	3kHz	0.37
2	5GHz 802.11ac VHT80	92.00	460.00	2.17	3kHz	0.36
1+2	5GHz 802.11ac VHT80 for Ant. 1	91.84	450.00	2.22	3kHz	0.37
1+2	5GHz 802.11ac VHT80 for Ant. 2	92.00	460.00	2.17	3kHz	0.36



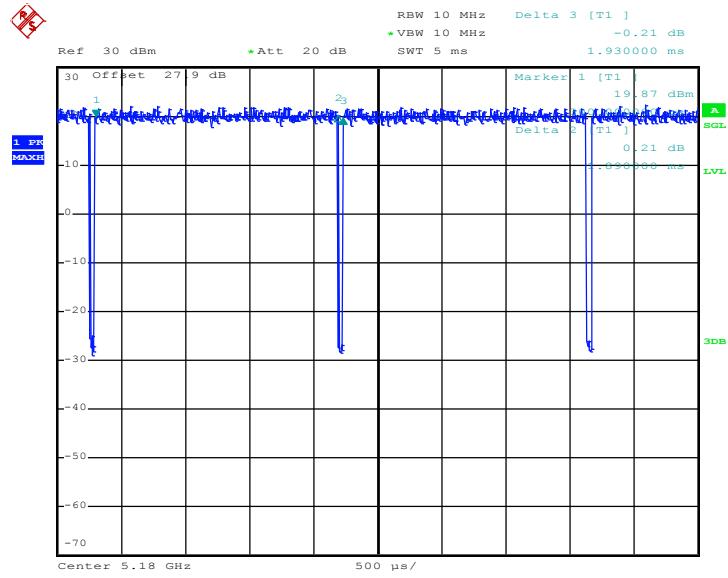
&lt;Ant. 1&gt;

## 802.11a



Date: 18.OCT.2018 02:01:56

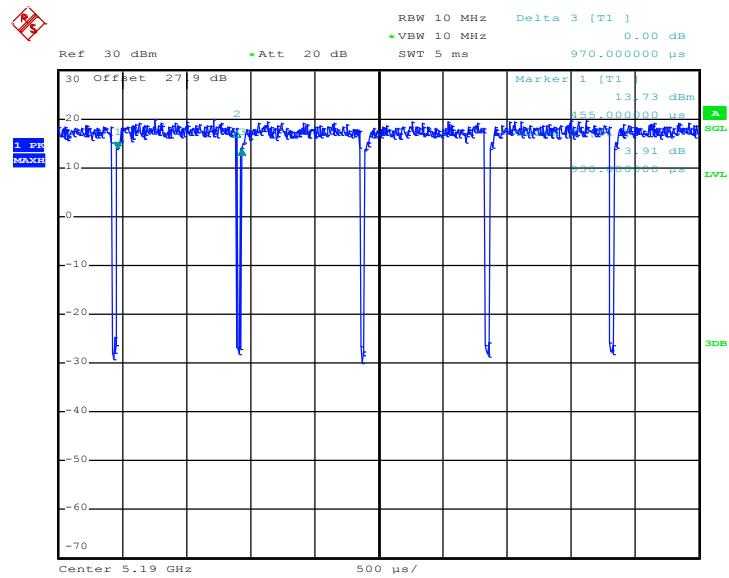
## 802.11n HT20



Date: 18.OCT.2018 02:14:31

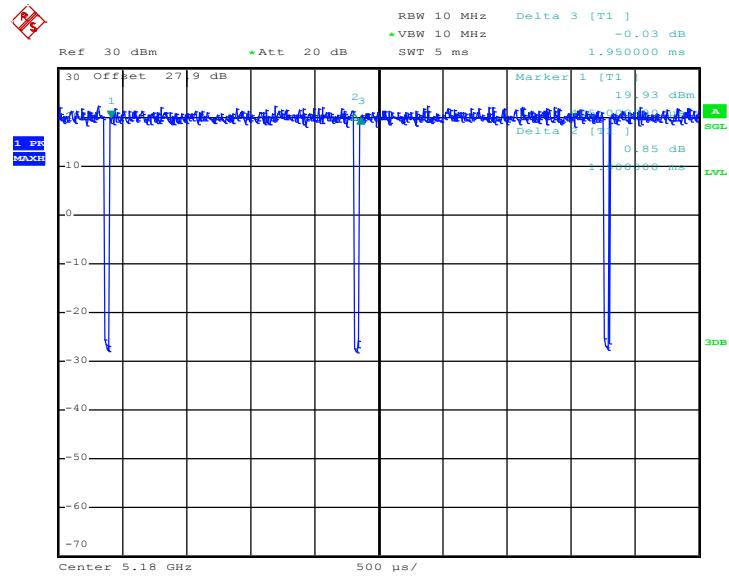


## 802.11n HT40



Date: 18.OCT.2018 02:18:37

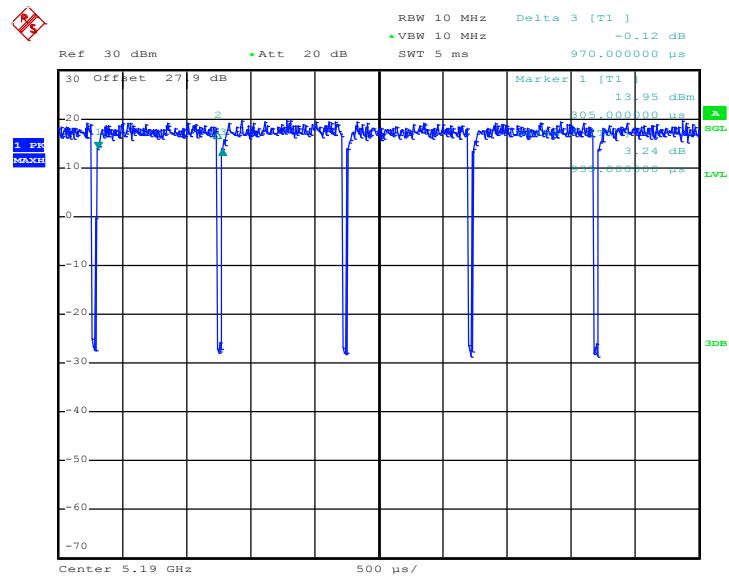
## 802.11ac VHT20



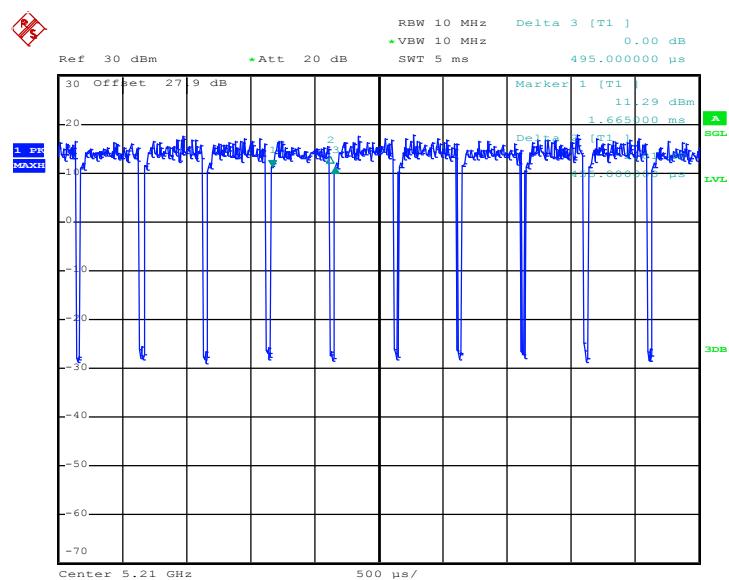
Date: 18.OCT.2018 02:23:44



## 802.11ac VHT40



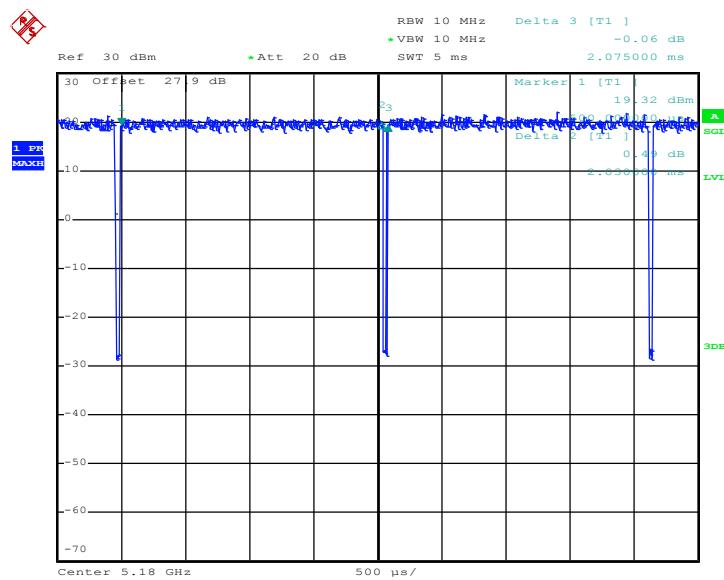
## 802.11ac VHT80





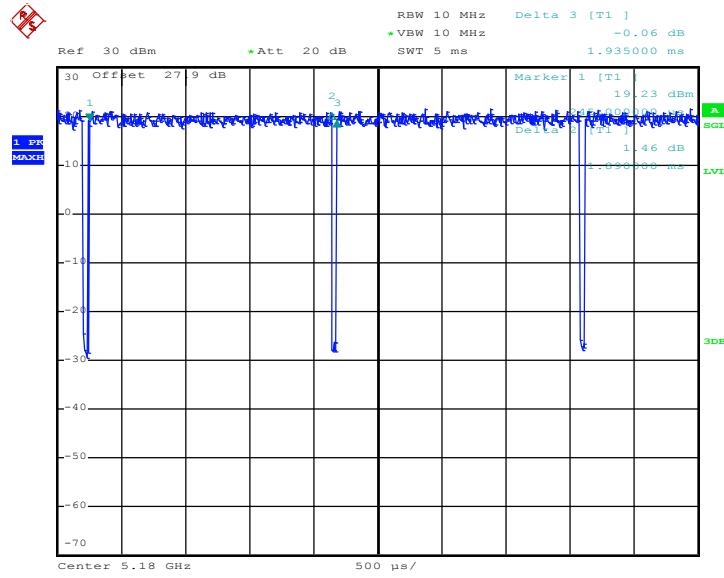
&lt;Ant. 2&gt;

## 802.11a



Date: 18.OCT.2018 02:06:34

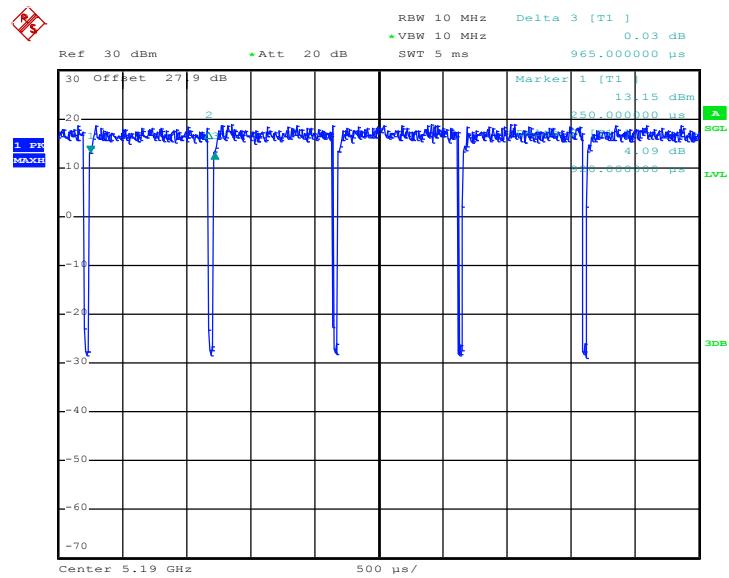
## 802.11n HT20



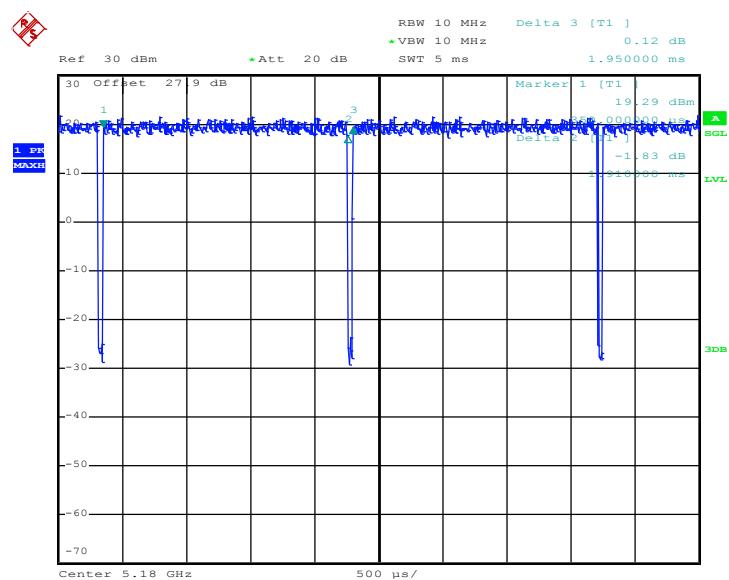
Date: 18.OCT.2018 02:13:17



## 802.11n HT40

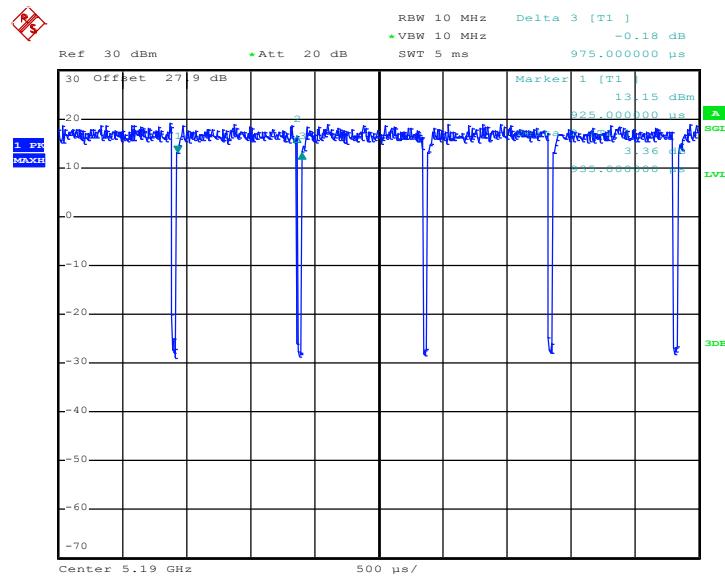


## 802.11ac VHT20



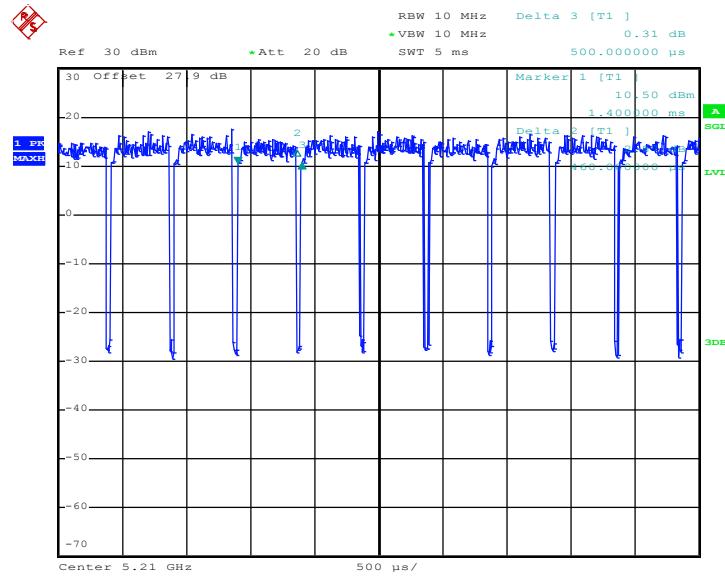


## 802.11ac VHT40



Date: 18.OCT.2018 02:29:46

## 802.11ac VHT80

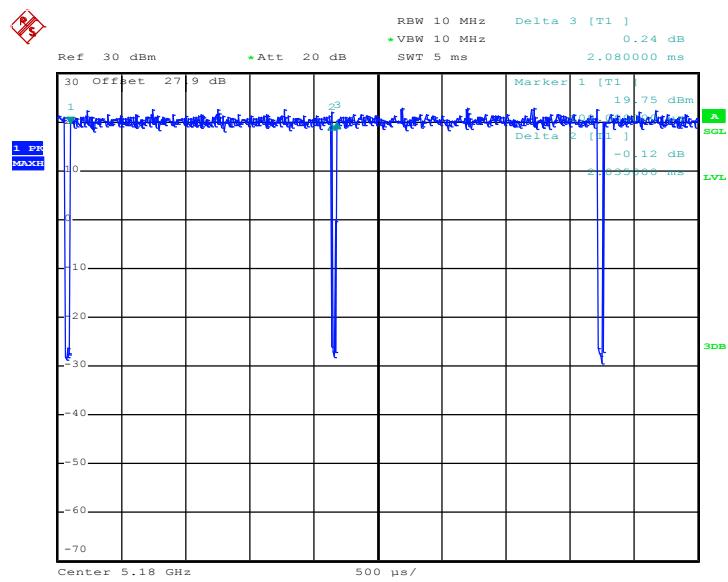


Date: 18.OCT.2018 02:35:21



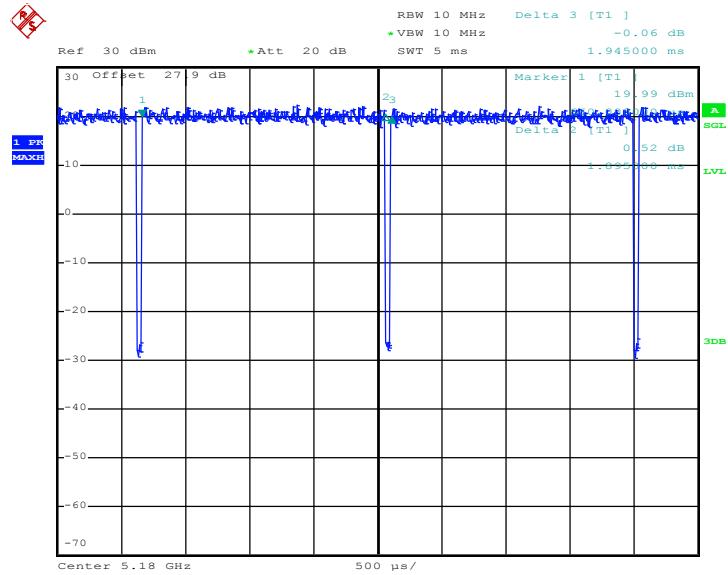
## MIMO &lt;Ant. 1&gt;

## 802.11a



Date: 18.OCT.2018 02:08:22

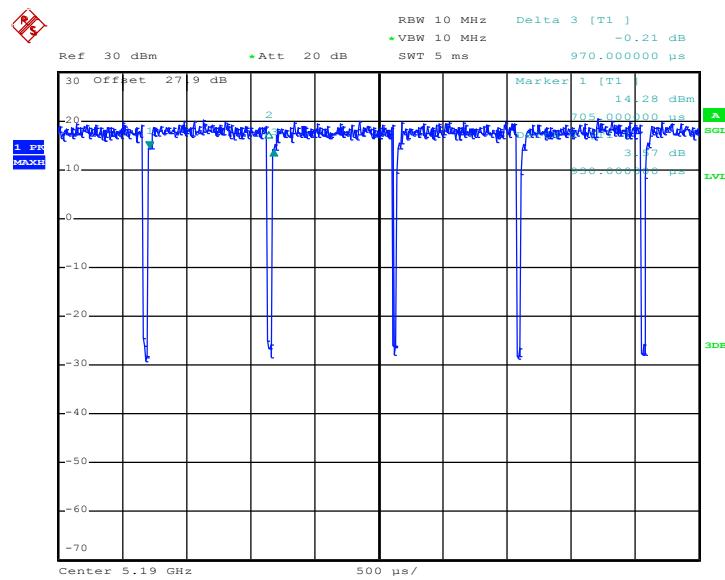
## 802.11n HT20



Date: 18.OCT.2018 02:15:44

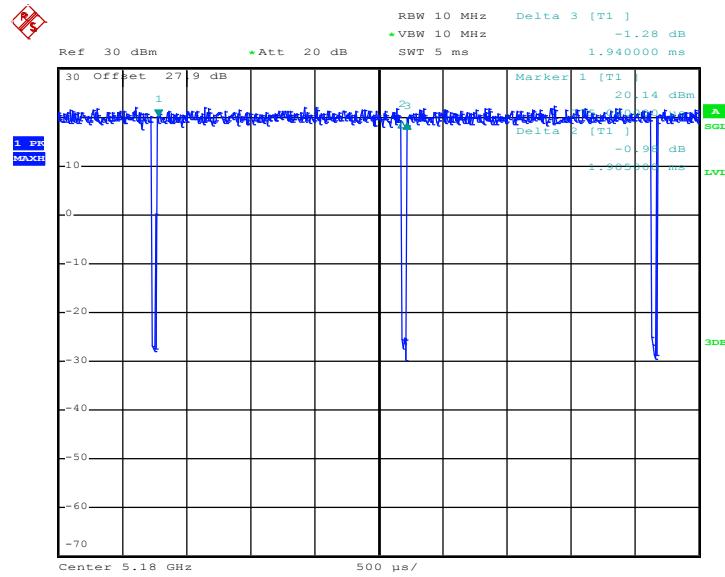


## 802.11n HT40



Date: 18.OCT.2018 02:20:38

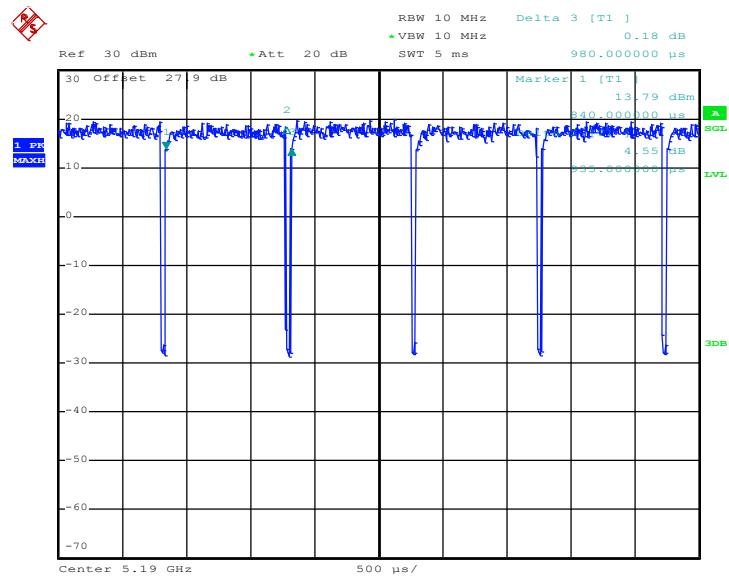
## 802.11ac VHT20



Date: 18.OCT.2018 02:26:00

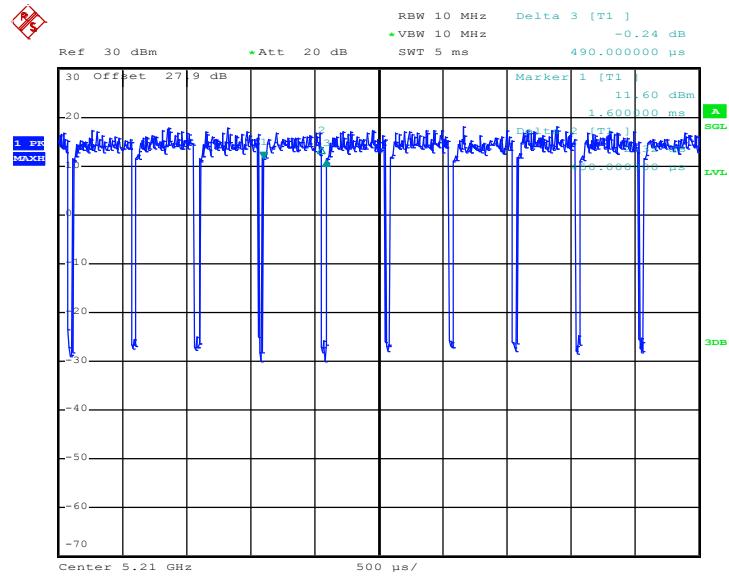


## 802.11ac VHT40



Date: 18.OCT.2018 02:31:10

## 802.11ac VHT80

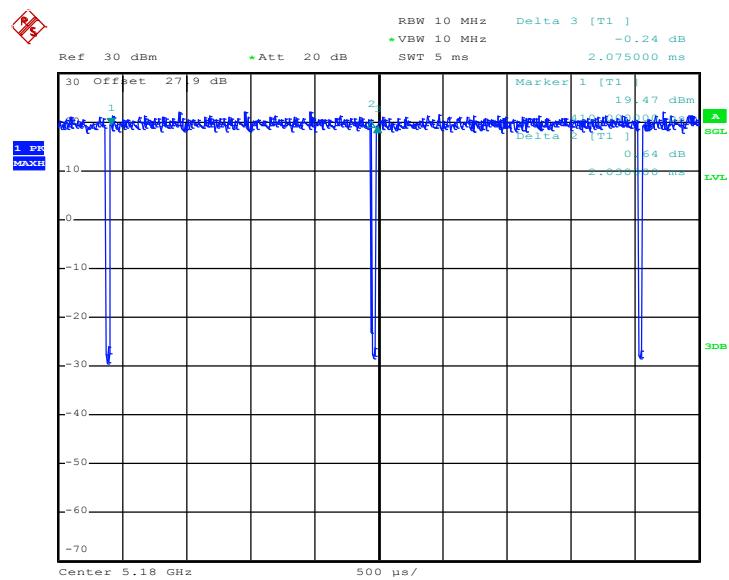


Date: 18.OCT.2018 02:38:17



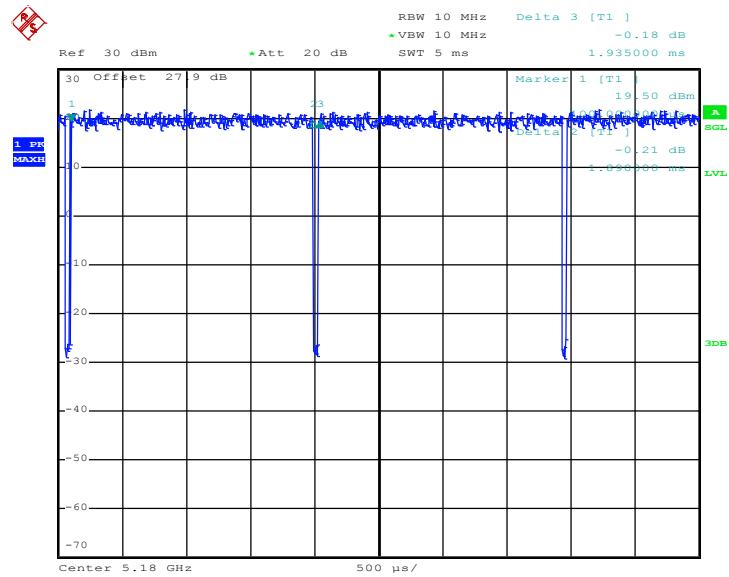
## MIMO &lt;Ant. 2&gt;

## 802.11a



Date: 18.OCT.2018 02:09:24

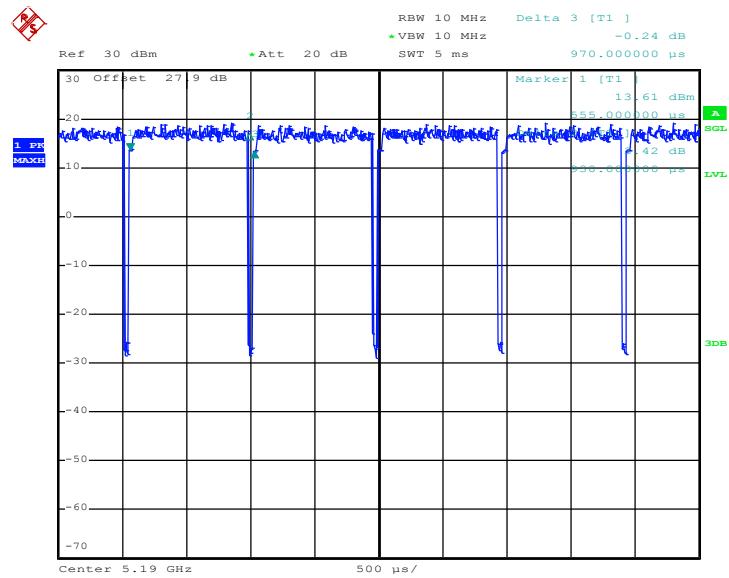
## 802.11n HT20



Date: 18.OCT.2018 02:17:03

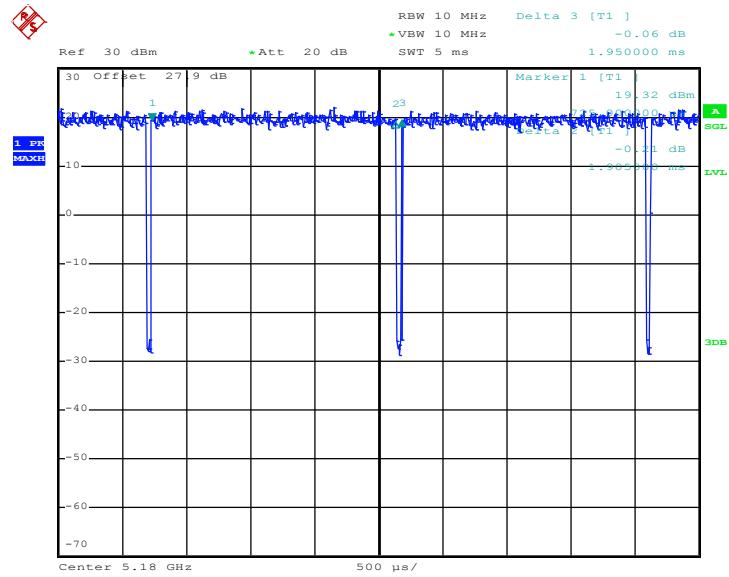


## 802.11n HT40



Date: 18.OCT.2018 02:21:41

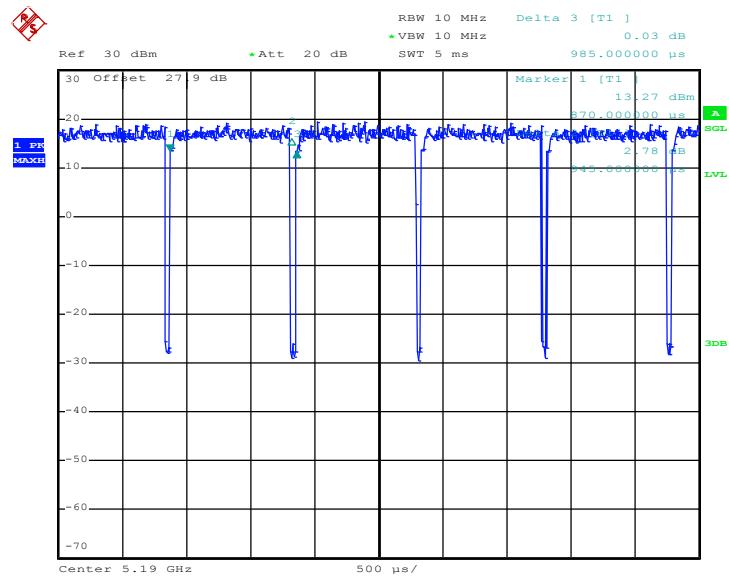
## 802.11ac VHT20



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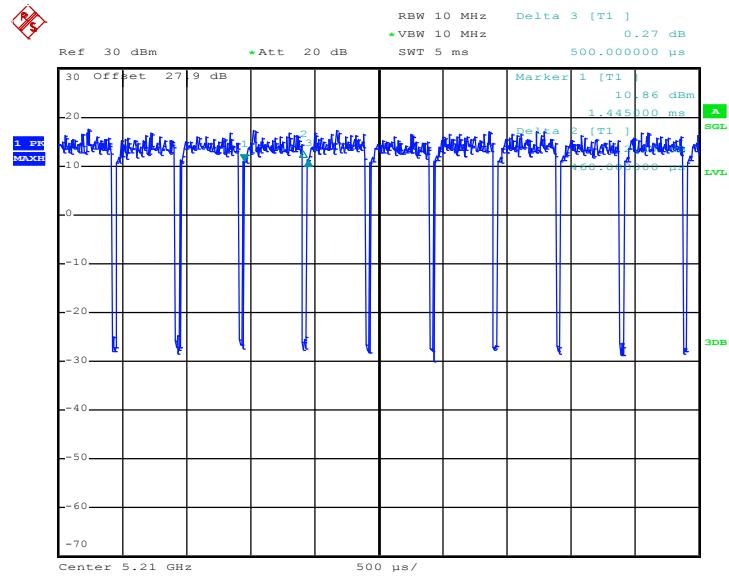


## 802.11ac VHT40



Date: 18.OCT.2018 02:31:46

## 802.11ac VHT80



Date: 18.OCT.2018 02:37:23